



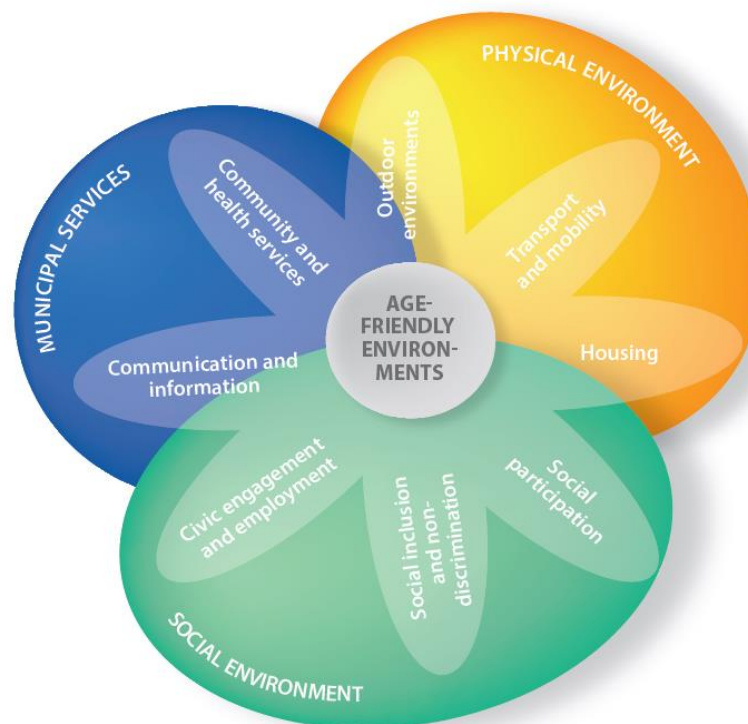
## Sustainable Housing supporting Health and Well-being

October 30<sup>th</sup> , 2020

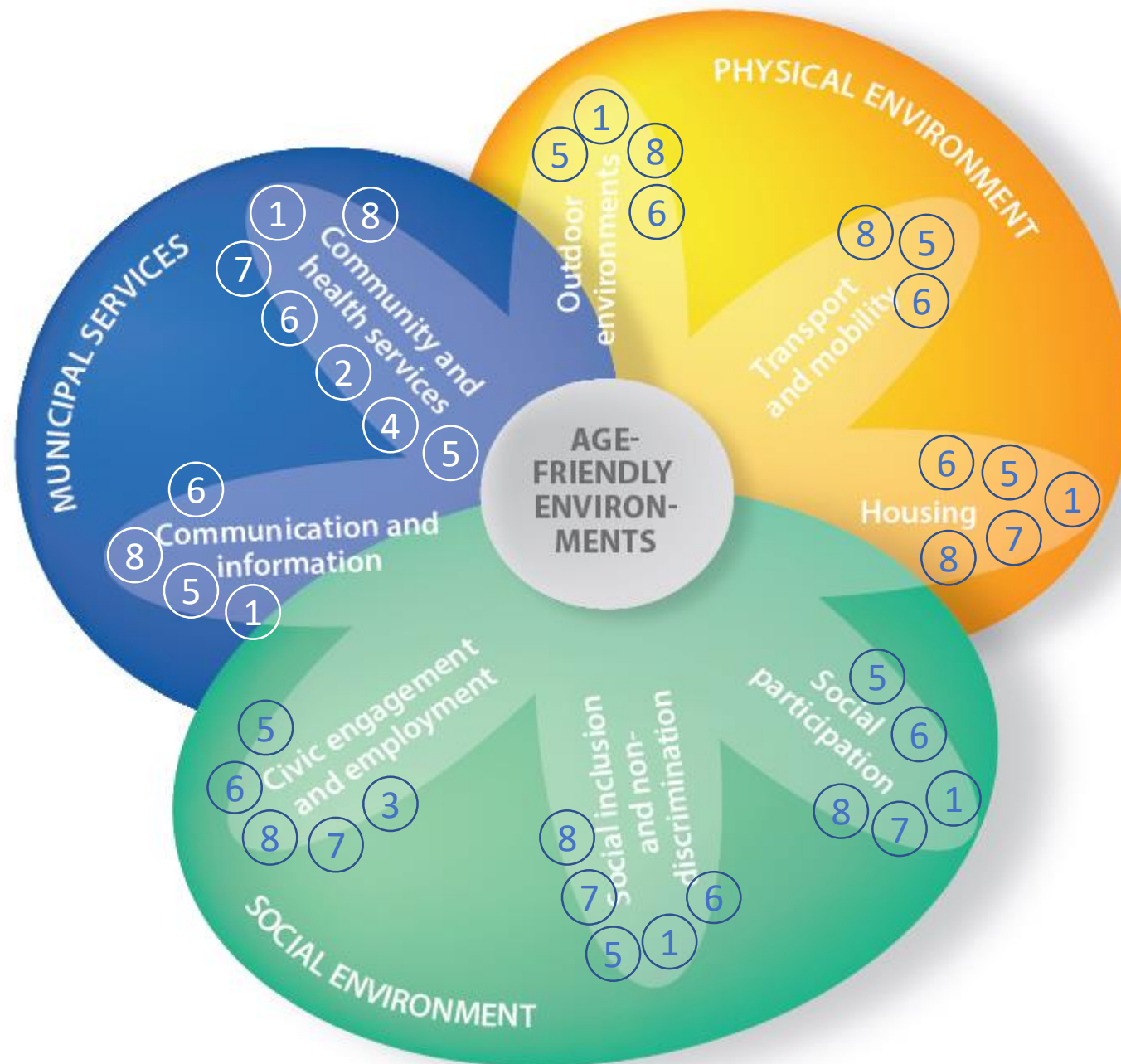
Chaired by



Horizon 2020  
European Union funding  
for Research & Innovation



1	 <b>2 Seas Mers Zeeën</b> <b>AGE'IN</b> <small>European Regional Development Fund</small>
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# AGENDA

9:00-9:05 Welcome statement ..... Irina Kalderon Libal, Policy Officer, EC

9:05-9:10 Workshop overview ..... Silvia Urra, TECNALIA

## Housing enabler & Market analysis

9:10-9:25 AGE'IN ..... Aline Ollevier, VIVES University of Applied Sciences

9:25-9:35 Q&A ..... Olatz Nicolas, Tecnalia

## Innovative solutions for housing supporting health and well-being

9:35–9:50 TeNDER ..... Anelore Hermann, GATV, Universidad Politécnica de Madrid.

9:50–10:05 SMARTWORK ..... Charalampos Vassiliou, BYTE

10:05–10:20 PHARAON ..... Filippo Cavallo- University of Florence

10:20–10:40 Q&A ..... Olatz Nicolas, TECNALIA

10:40–10:50 Break



# AGENDA

## Supporting investment into and implementation of age-friendly housing

10:50–11:05 Homes4Life ..... Silvia Urrea, TECNALIA

## Get involved: age-friendly housing networking and clustering

11:05–11:30 Smart Healthy Age-Friendly Environments –  
policy and implementation ..... Carina Dantas, Cáritas Diocesana de Coimbra

11:30–11:50 Q&A ..... Olatz Nicolas, TECNALIA

11:50–12:20 Discussion, wrap-up and next steps ..... Silvia Urrea, TECNALIA

12:20–12:30 Conclusion ..... Irina Kalderon Libal, Policy Officer, EC

12:30 –End of the session



**ALINE OLLEVIER**





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**Social  
innovation**

**AGE IN' Project (Age Independently)**  
**Aline Ollevier**  
30/10/2020 – Sustainable places



**SUSTAINABLE  
PLACES**

# Main objective

**Keeping the ageing population independent for longer at their own home**, combining house adaptation and local ecosystem for ageing population.

**Improving their quality of life and quality of their surrounding environment** (services, public space...).

Promote actions in order to develop **social links**.





# Partnership

***Lead Partner:*** Boulogne sur mer Développement Côte d'Opale  
***Municipalities***

The town of Boulogne sur mer and the city of Bruges

***Community centres/ social centres :***

- Boulogne sur mer, Saint Martin and Wimereux community centres
- OCMW/ MINTUS in Bruges

***Housing sector partners :***

- Habitat du littoral (social housing organisation)
- WAC Zeuws Vlaanderen (NGO in charge of housing adaptation for seniors (NL))

***Universities :***

VIVES University (B)  
University of Plymouth (UK)

***Other***

Eurasanté (network of companies dealing with health issues)  
Age UK



# Main outputs

## Adapt housing and public space

- Understand 55+ current and future needs (diagnostic/ **screening of housings and districts**).
- empower 55+ to adapt their housing to remain independant at home for longer (**awareness raising of seniors/ site visits**).
- Pilot actions to improve the offer of adapted houses and public spaces (**social housing awareness raising...**)
- Pilot network to promote **adapted houses and urban spaces for elderly**.
- Tests in living labs to improve current technologies and products.



# Main outputs

## Strengthen social links and reduce social isolation

- Strategy to **detect isolated seniors** and identify their weakness and specific needs
- Pilot actions to **build social networks** around socially isolated people
- Pilot actions in order to animate a community of inhabitants
- Demonstration actions to increase digital literacy





# Pilotes

- **Flats with various range of house adaptations** et adaptation for seniors (Bruges and Boulogne sur mer )
- **Home automation labs** (universities in B and UK) : offer new tools more adapted to seniors needs and awareness raising of poeple who will visit the pilots.
- « **smart kitchen** » **adapted to senior needs** will be used for workshops with elderly (Social Centre in Boulogne sur mer)
- **Public space improvement** (Boulogne sur mer and Bruges)  
Groups of Seniors taking part to the diagnostic.

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**What about our housing?**

# The housing enabler

Based on the Enabler Concept (Steinfeld et al, 1979)

Captures objective aspects of housing:

- Housing standard Environmental barriers
- Magnitude of accessibility problems
- In addition: Functional profile (profile of functional limitations)
- Type profiles
- Number of functional limitations - A set of variables for use in research

Complete Instrument – 3-step procedure Individual level, e.g. housing adaptations, relocation counselling

Group and population levels, by means of data collected with individuals or the use of type profiles

# Screenings in West Flanders

## Type of housing

Country			Frequency	Percent	Valid Percent
Belgium	Valid	House	62	56,4	57,4
		Multi dwelling house	34	30,9	31,5
		Bungalow	12	10,9	11,1
		Total	108	98,2	100,0
	Missing	System	2	1,8	
	Total		110	100,0	



# Screenings in West Flanders

## Location

- City 31,5%
- Suburb 54,6%
- Rural 13,9%

## Construction date

- Mean 1960

## Birth year resident

- Mean 1946

Profile	Description
Profile 1	only limitations in mobility (reduced function of the lower limbs and spine, balance, endurance and coordination)
Profile 2	limitations in mobility and upper limb
Profile 3	limitations in mobility, upper limb and dependence on mobility aids (walking aid and wheelchair)
Profile 4	limitations in mobility, upper limb, dependence on mobility aids and loss of vision

# Accessibility problem score

The higher this score, the higher the accessibility problems for a specific profile.

Profile 1							
	Accessibility problem score			Kruskal-Wallis one way analysis of variance			
	Mean			Mean rank			P-waarde
	House	Appart-ment	bungalow	House	Appart-ment	bungalow	
Exterior	46,21	49,76	41,58	53,19	60,59	44,04	0.255
Entrance	28,98	78,68	25,00	40.95	85,07	37,88	0,000
Indoor	121,00	84,74	71,76	72,87	32,82	21	0,000
Total	196,19	213,18	138,25	55,19	76,79	13,25	0.000

# EXTERIOR

## PROFILE 1

only limitations in mobility (reduced function of the lower limbs and spine, balance, endurance and coordination)

n=64; 9,76cm

high kerbs, more than 4cm

irregular/uneven surface

letterbox only reachable by steps or other differences in level(>15mm) and difficult to reach in height (0,8-1m)

refuse room/refuse bin only reachable by steps or other differences in level and difficult to reach (0,8-1m)

unsafe surface in car park

## PROFILE 2

limitations in mobility and upper limb

no resting surfaces



# ENTRANCES

PROFILE 1 only limitations in mobility (reduced function of the lower limbs and spine, balance, endurance and coordination)	PROFILE 2 limitations in mobility	PROFILE 3 limitations in mobility, upper limb and dependence on mobility aids (walking)	PROFILE 4 limitations in mobility, upper limb, dependence on mobility
n=97; 11,44cm high tresholds or steps at entrance (>15mm)		n=55;74cm narrow door opening, less than 84cm	sitting-out place/balcony too narrow (less than 1,5m)
n=98; 11,36cm sitting out place/balconny have level difference		wide gaps in the floor (more than 5mm)	
heavy doors, not automatically, do not stay and cannot be fastened in open position or close to quickly		insufficient manoevring space at doors	
stairs: high, low and/or irregular heights of risers, no handrails/only one side, no alternative for stairs, narrow or irregular depth of stair treads			
lift: doors do not stay in open position, close to quickly and cannot be fastened, no seat in lift, controls placed to high or to low, doesnt stop at the same level as building floor, no handrail			

# GENERAL INDOOR

PROFILE 1 only limitations in mobility (reduced function of the lower limbs and spine, balance, endurance and	PROFILE 2 limitations in mobility and upper limb	PROFILE 3 limitations in mobility, upper limb and dependence on	PROFILE 4 limitations in mobility, upper limb, dependence on mobility
Stairs: treads with narrow/irregular depth, neccassary stairs for dwelling functions(upstairs, basement, laudryroom, storage areas), high/low/irregular height of risers, no handrails or only at one side, handrails to short	Manipulation of controls: requires hands, turning motion of wrist, requires fingers, very small	narrow passages in relation to fixed infrastructure	no tactile cues to stairway in circulation path
insufficient manoeuvring spaces in relation to movable furnishings		n=68; 67,23cm narrow doors (less than 76cm)	
Fine motor control required		stairs: projecting nosing or open-risers	
Controls placed to high(>1,1m) (switches, sockets, handles, drawers) and high force to activate			

stair treads lower depth than 26 cm (n=52; 20,82cm); risers higher than 17cm (n=52; 18,59cm)

# KITCHEN

PROFILE 1 only limitations in mobility (reduced function of the lower limbs and spine, balance, endurance and	PROFILE 2 limitations in mobility and upper limb	PROFILE 3 limitations in mobility,	PROFILE 4 limitations in mobility, upper limb, dependence on mobility
wall-mounted cupboard and shelves placed to high (>1.4m above floor) and shelves too deep (more than 30cm) shelves: n=77; 48,38cm	controls to high (>1,1m) and very small controls		ceramic hobs
insufficient manoeuvring spaces around storage units (less than 1,2m in front)	hobs with ordinary rings		
no working surfaces with leg room			
no surface at height suitable for sitting while working, 84cm or lower required n=92; 90,63cm			
fine motor skills required			

# BATHROOM

PROFILE 1 only limitations in mobility (reduced function of the lower limbs and spine, balance, endurance and	PROFILE 2 limitations in mobility and upper limb	PROFILE 3 limitations in mobility,	PROFILE 4 limitations in mobility, upper limb,
no grab bar at shower, bath and/or toilet	Hands: use requires hands, turning motion of wrist required, use of fingers required	grab bar in high position (>90cm)	illogical controls
wash basin: insufficient leg room underneath, can only be used for standing (>81cm)			
storage cupboards, towel hooks, placed to high or to low (0,9-1,2m)			
toilet to low, 47cm or lower <b>n=87, 41,85cm</b>			
shower stall with kerb/ level difference			

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**What about technology ?**





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# **TECHNOLOGY FOR AGEING IN PLACE**

# A systematic review of the literature

Search strategy: 4 databases, 3180 original articles.

## KEY CONCLUSIONS

1. More evidence is needed among the effectiveness of home health technology in healthy older adults
2. The identified technologies that support ageing in place focus on accessible communication, emergency assistance, physical well-being and mental well-being. When studying their effectiveness, we see that the use of a neurofeedback headband and EEG system, an accessible computer system, a wristband with pedometer, a biofeedback device and an online video platform can bring added value to ageing in place.
3. Patient-centredness is crucial when developing, evaluating and integrating technology at home. Introduce home health technology with guidance, training and follow-up

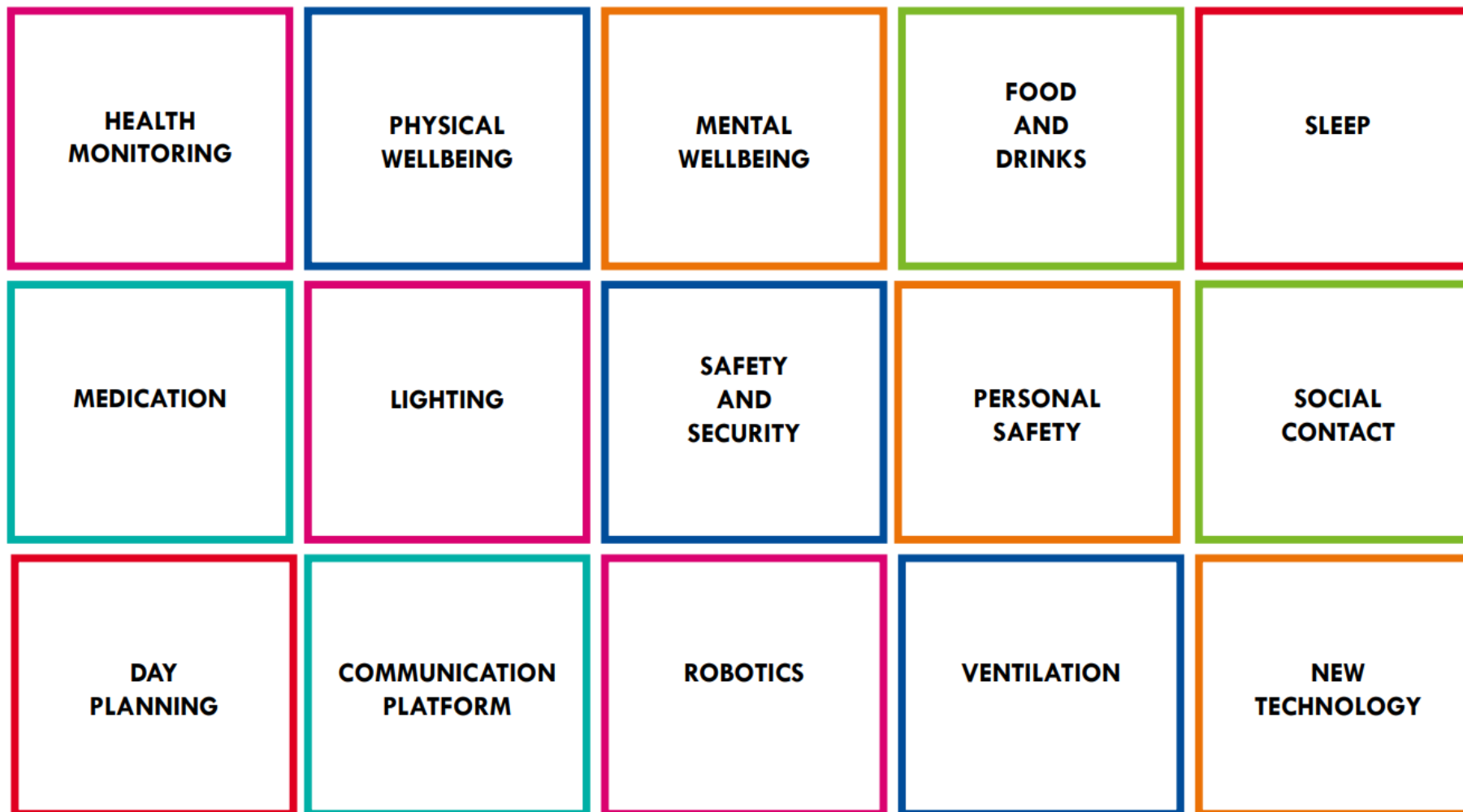


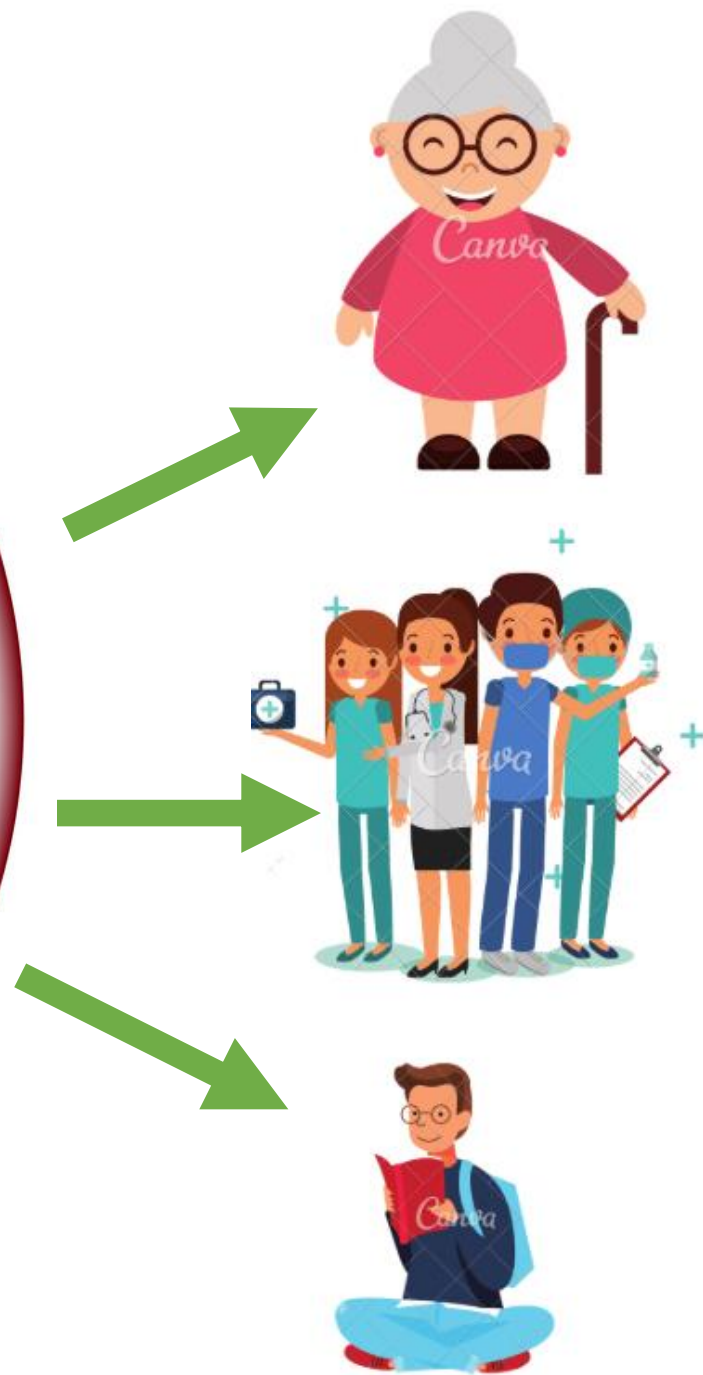


**Market research**  
**Off-the-shelf technology for ageing in place**



**AGE'INdependently**





**Usersfeedback  
&  
Tailored interactive  
demonstration  
material**



360° video & audio  
and feedback



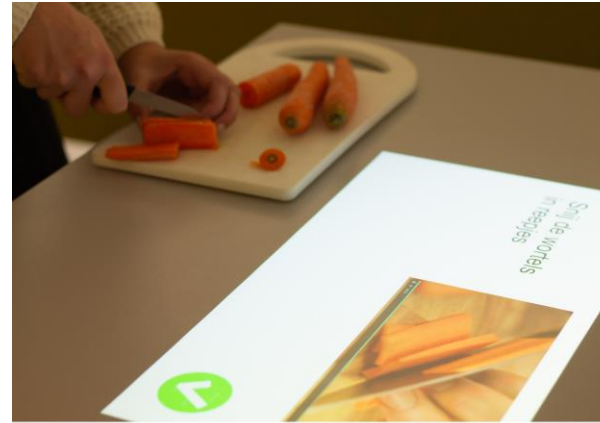




**How to spread information?**



**How to raise awareness  
in the ageing  
population?**



**HOME COACH**  
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**LichtWerk**   
slimme assistieve technologie



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[www.vives.be/nl/onderzoek/  
project/agein](http://www.vives.be/nl/onderzoek/project/agein)

[www.ageindependently.eu/](http://www.ageindependently.eu/)

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WAC ZEEUWS VLAANDEREN







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**ALINE OLLEVIER**



**ANNELORE HERMANN**





**affecTive basEd iNtegrated carE for better Quality of Life**



**Annelore Hermann ~ Universidad Politécnica de Madrid ~ 30/10/20**

## MAIN INFOS:

- **Topic:** SC1-DTH-11-2019 Large Scale pilots of personalised & outcome based integrated care
- **Funding Scheme:** IA - Innovation action
- **Grant Agreement ID:** 875325
- **Coordinator:** Federico Álvarez, UPM
- **Email:** [contact@tender-health.eu](mailto:contact@tender-health.eu)

## FACTS & FIGURES

Start date

1 November 2019

End date

31 October 2022



13

PARTNERS

7

COUNTRIES

1.500

PATIENTS

5

RESEARCH PILOTS





Datawizard

ubiwhere



**WHO ARE WE?**



Annelore Hermann ~ Universidad Politécnica de Madrid ~ 30/10/20

## WHY TeNDER?

Today



There are **10 million** people living with Alzheimer's disease and other forms of dementia in Europe

Source: World Health Organization/Europe



This number set to **double** by 2030

Source: World Health Organization/Europe



Chronic **comorbidities** are common

Around **1.2 million** people are affected by Parkinson's Disease in Europe

Source: European Brain Council



It is estimated that by 2040, there will be **13 million** people living with Parkinson's worldwide

Source: The Global Burden of Disease Study (2015)

TeNDER is a project funded by the European Union, which helps patients safely extend their autonomy in different living environments: at home, in day-care centres, rehabilitation centres, and in hospital. TeNDER's assistive and communication tools will help monitor patients' physical and mental health, and further link patients to their social and health support system to ensure integrated care.

## Our 9 objectives at a glance:

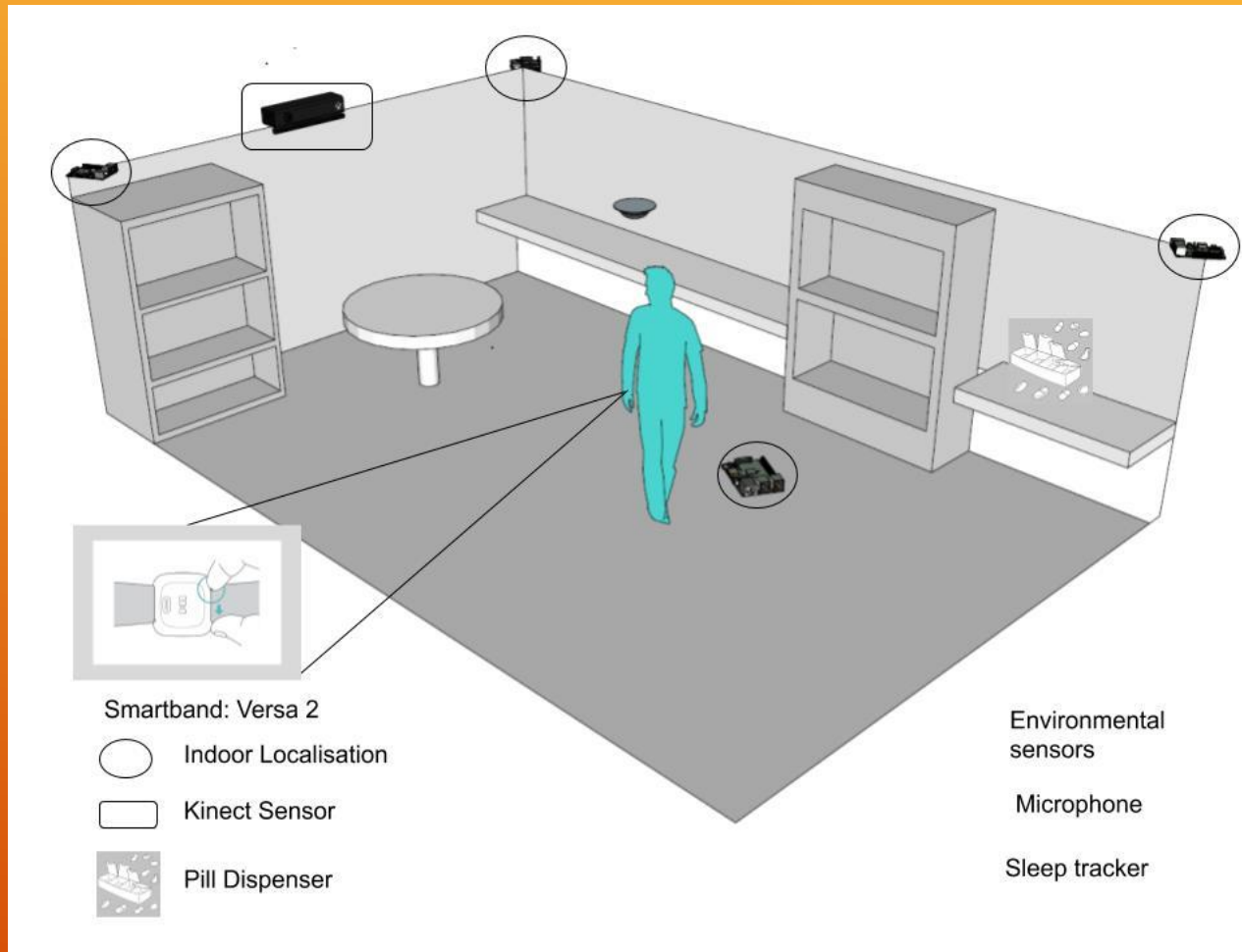
- 1: Detect patients activity recognition, health and emotional status and alert
- 2: Ensure the secure and efficient sharing and processing of patients' data
- 3: Improve the quality of life for the patients and his/her family and caregivers as well as the working conditions of health and social care providers and health professionals
- 4: Build the TeNDER Platform as an open, service-oriented architecture
- 5: Creation of an information-driven TeNDER ecosystem
- 6: Follow participatory design process
- 7: Organisational and Collaboration Models
- 8: Generate impact & create business and job creation opportunities
- 9: Conduct large scale pilots

## HOW WILL TeNDER WORK?

- combining user-friendly technologies and substantial research experience: improve the quality of life of patients and those who surround them
- affect-based micro-tools that will recognise a person's mood, movements and basic vitals, then adapt the system's probes to his or her needs and match them with clinical and clerical patient information
- ease communication between different health and care providers
- TeNDER's technical, legal and ethical experts will ensure that all personal data is GDPR-compliant



## A BRIEF TECHNICAL OVERVIEW



modular structure to provide 7 services:

- 1) Active Sensorial Continuous Monitoring, Warning and Reporting
- 2) Social Services Matching
- 3) Data Analysis and Personalized Recommendations
- 4) Pathway Tracking: the patient's non-clinical activity
- 5) Virtual Assistant
- 6) Communication via the social platform
- 7) GDPR & Quality of Life Assessment

**THE PILOTS (in 3 waves) will start in January 2021:**

- **Spain: Madrid**
- **Italy: Rome**
- **Slovenia: Ljubljana**
- **Germany: Bavaria**

## THE IMPACT WE WANT TO CREATE:

- ensure users' trust
- empower citizens
- maximize the potential of digital tools

# THANK YOU!

My e-mail: [ath@gatv.ssr.upm.es](mailto:ath@gatv.ssr.upm.es)

FOLLOW US:

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**CHARALAMPOS VASSILIOU**





# SMARTWORK Our Story

## Project Overview

SP20 - Sustainable Housing supporting Health and Well-being

Charalampos Vassiliou



**SUSTAINABLE  
PLACES 2020**

October 27-30, 2020  
Digital Event



## What is SmartWork?

**The SmartWork project builds a Worker-Centric AI System for work ability sustainability, which integrates unobtrusive sensing and modelling of the worker state, with a suite of novel services for context and worker-aware adaptive work support.**

**SmartWork aims to design and create age-friendly living and working spaces.**



# The Challenge

For workers aged 55-65 to maintain an active professional life and independent living, despite the ageing process and the potential functional limitations, health conditions and/or care needs that this process frequently entails.

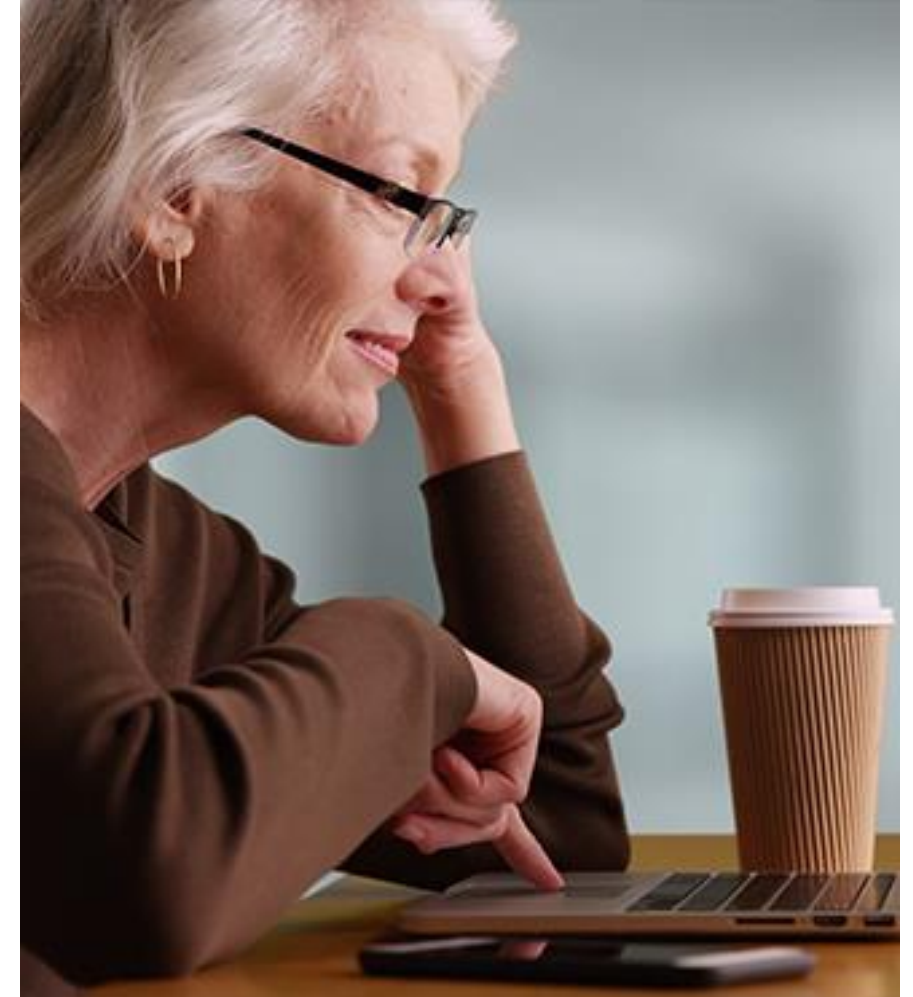
# Objectives

- 1 To create a Worker-centric Artificial Intelligence (AI) system for work ability sustainability
- 2 To achieve unobtrusive sensing and modelling of the worker state
- 3 To implement a novel SmartWork services suite for the context and worker-aware adaptive work support
- 4 To co-create and evaluate the SmartWork system, by organizing two pilots, with the active engagement of the end users in real world settings, with special attention to ethics, privacy and security

# Target Groups

## SmartWork will deliver benefits for:

- **Office workers aged 55-65** - by providing continuous monitoring and risk assessment of their health status and functional and cognitive capacity, as well as the provision of adaptive work support.
- **Employers** - by empowering them to improve the efficiency and productivity of office worker teams with AI decision support tools and optimal contextual knowledge management.
- **Carers** - by monitoring the overall health status of the people they care for, thus providing full support to informal caring tasks.





# SmartWork Services

## Key features of SmartWork:

- Offers a suite of smart services, using AI, to support active and healthy ageing for office workers aged 55-65
- Monitors workers' health, behaviour, cognitive and emotional status, and responds to their needs
- Supports workers staying longer and happier in their job by tackling the consequences of ageing, sedentarism and physical and mental health problems
- Delivers benefits for older workers, their employers and carers and has a wider positive impact on society and community wellbeing
- Engages end users in real-world settings at pilot sites in Coimbra (Portugal) and Aarhus (Denmark) to co-create and evaluate the SmartWork system.



# SmartWork Services

## Office Worker Services



### healthyMe

Delivers precise monitoring of physiological and behavioural parameters, key for efficient self-management of chronic health conditions.



### myWorkAbility

Measures the psycho-physical capacity of the office worker, suggesting flexible working practices and supporting decisions to improve their wellbeing.



### ubiWork

Helps employees maintain a work/life balance and help employers improve the productivity and efficiency of their business.



### workCoach

Provides on-demand training support personalised to the older worker's profile.

## Employer Services



### digiTeam

Enables flexible management of the workforce to increase efficiency and productivity and to optimize training and knowledge management activities.

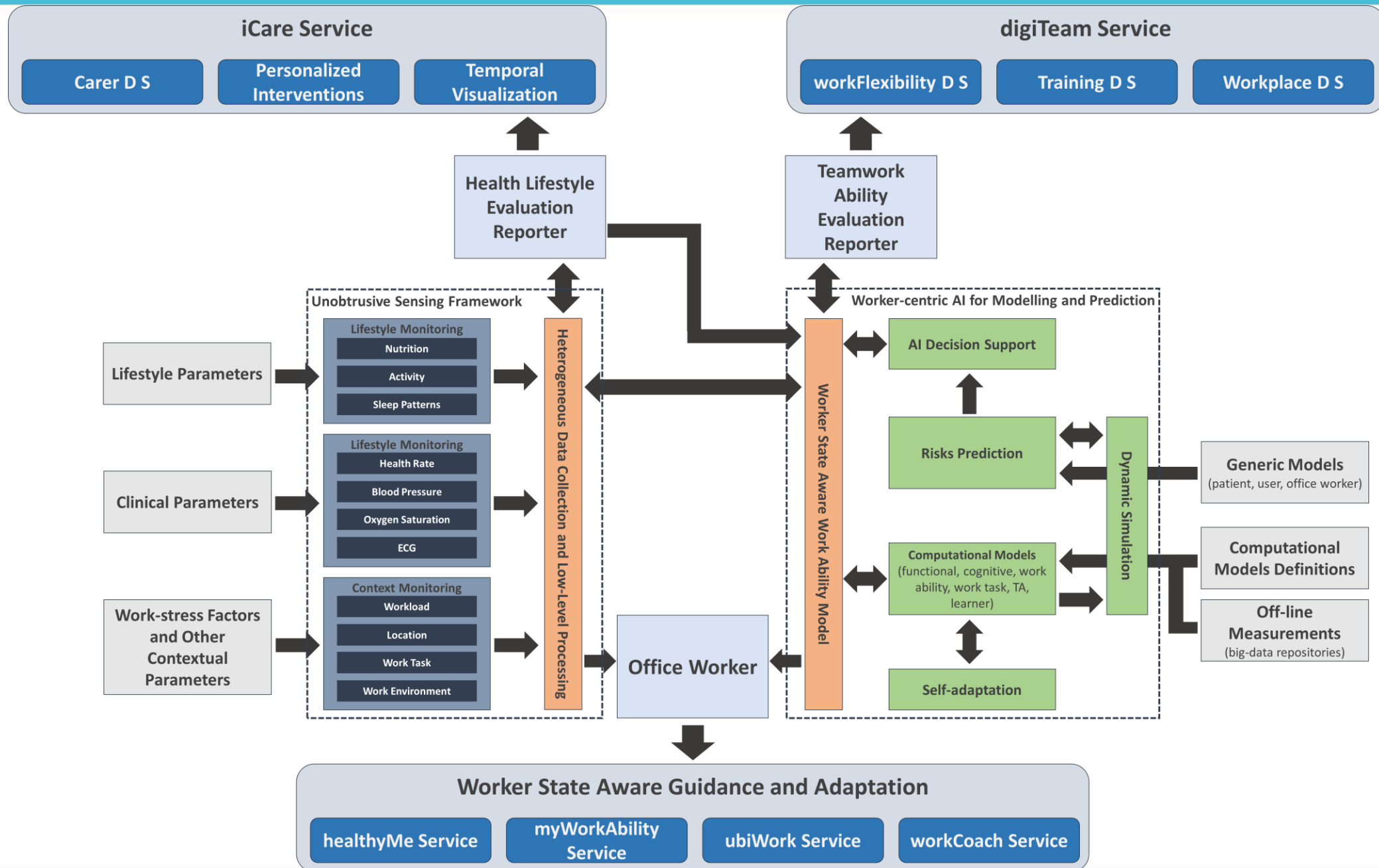
## Carer Services



### iCare

An adaptable and accurate service for health monitoring allowing carers for older workers to select and personalize parameters depending on the specific disease or condition.

# From a high-level



# Foreseen Impact

1

## Older Office Workers

- Intended Living
- Better QoL
- Socio-economic Benefits
- Enhanced Workability
- Increased Self-esteem
- Enhanced Health & Safety at Work

2

## Employers

- Improved HRM
- Increased Productivity
- Improved Safety at Work

3

## Carers

- Continuous Monitoring of Older Workers
- Better Risk Assessment

4

## Healthcare Systems

- Reduced Expenses for Medication and Rehabilitation Services

5

## Scientific Community

- Innovative ICT tools

6

## Society

- Enhanced Innovation Capacity
- Improved Safety at Work
- Better Living Standards
- Increased Workforce
- Increased Economic Independence



# SmartWork Pilots

SmartWork will engage with end users in real-world settings at pilot sites in Coimbra (Portugal) and Aarhus (Denmark) to co-create and evaluate the SmartWork system.

# Phase 1: User Needs & Requirements Analysis

## Consultation with end users via:

- **Online Questionnaire** – for office workers aged 55+
- **Interviews & focus groups** - with office workers 55+, employers and carers

This phase will also include a preliminary evaluation of ethical and safety issues.

This will inform the development of the SmartWork prototype.





## Phase 2: Trial operation in semi-controlled environments

### Pilot test of the first SmartWork prototype

Location: pilot site in Coimbra, Portugal.

Duration: 2 months

Participants: 12 older office workers, 2 managers, 2 carers

Aim: to test the ease of use of the SmartWork system and Services Suite and identify any practical difficulties the end users may experience.

The data collected will be used to improve technical aspects such as robustness, interfaces, resources, usage etc.

The pilot will be monitored in all environments (work, home, on-the-move).



## Phase 3: Field Trials with end-users

### Pilot test of updated SmartWork prototype in real-life settings

Location: pilot sites in Coimbra, Portugal and Aarhus, Denmark.

Duration: 6 months

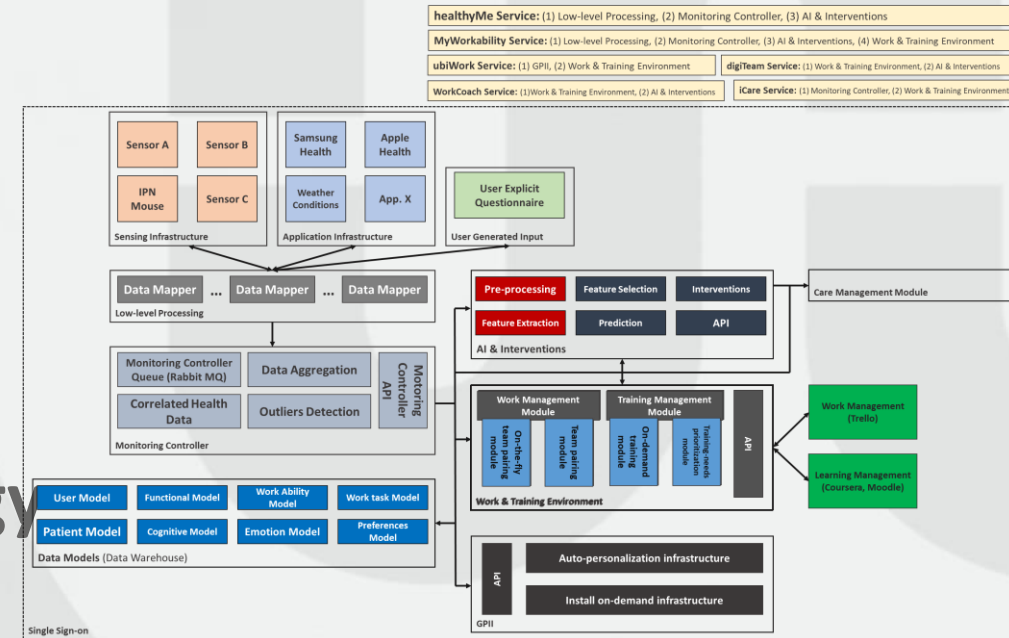
Participants: 60 office workers age 55-65

Aim: to obtain preliminary evidence of effectiveness of the SmartWork system and Services Suite in maintaining/ increasing the work ability of older office workers.



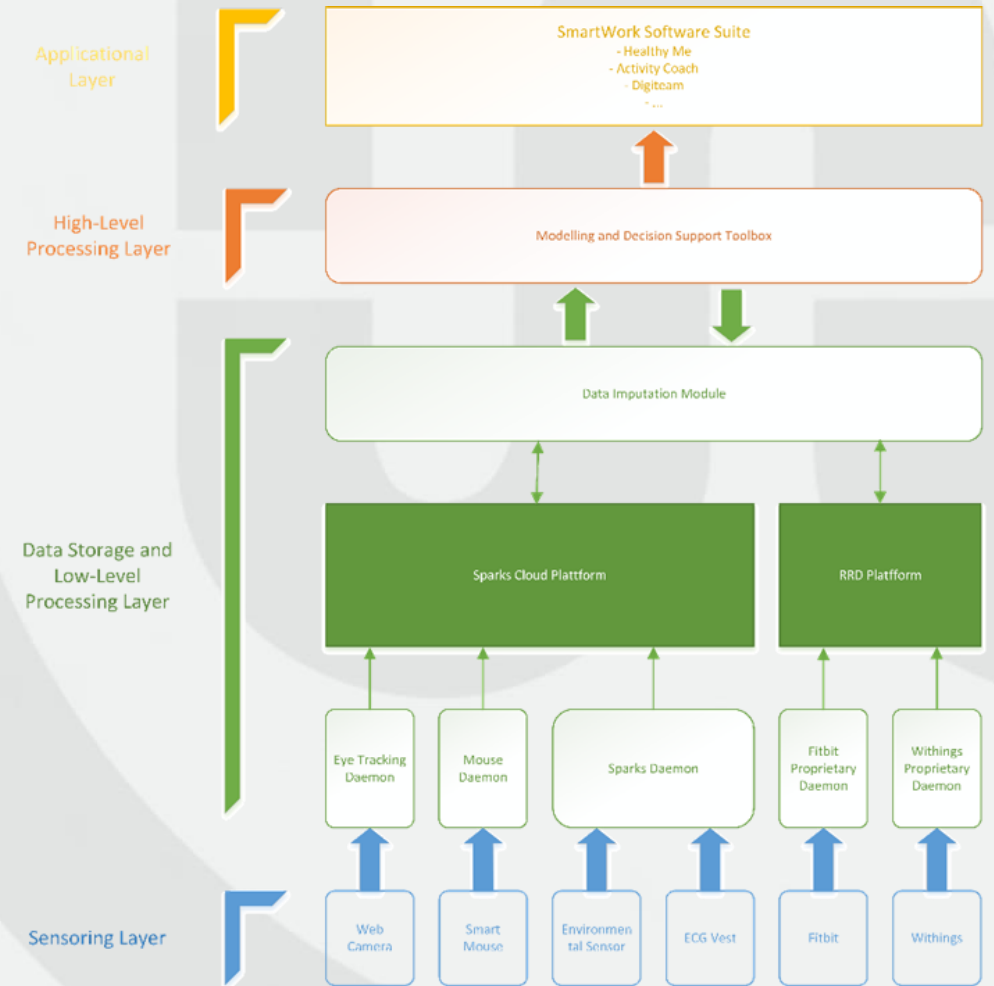
# Major highlights (i)

- Performance of SOTA and gap analysis
- Analysis of user needs
  - Co-creative approach
  - User requirements and scenarios of use
- Data collection and intervention strategy
- System Architecture
  - System requirements



## Major highlights (ii)

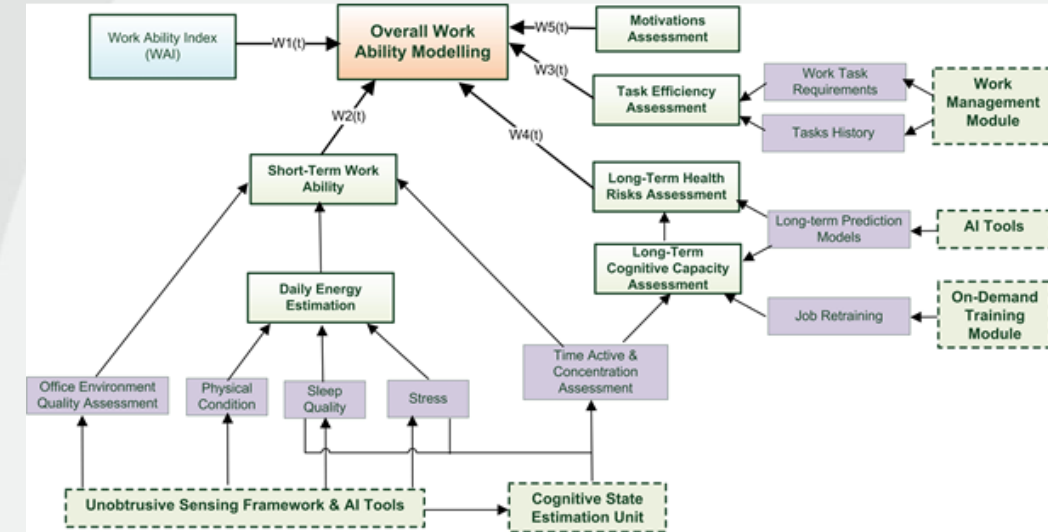
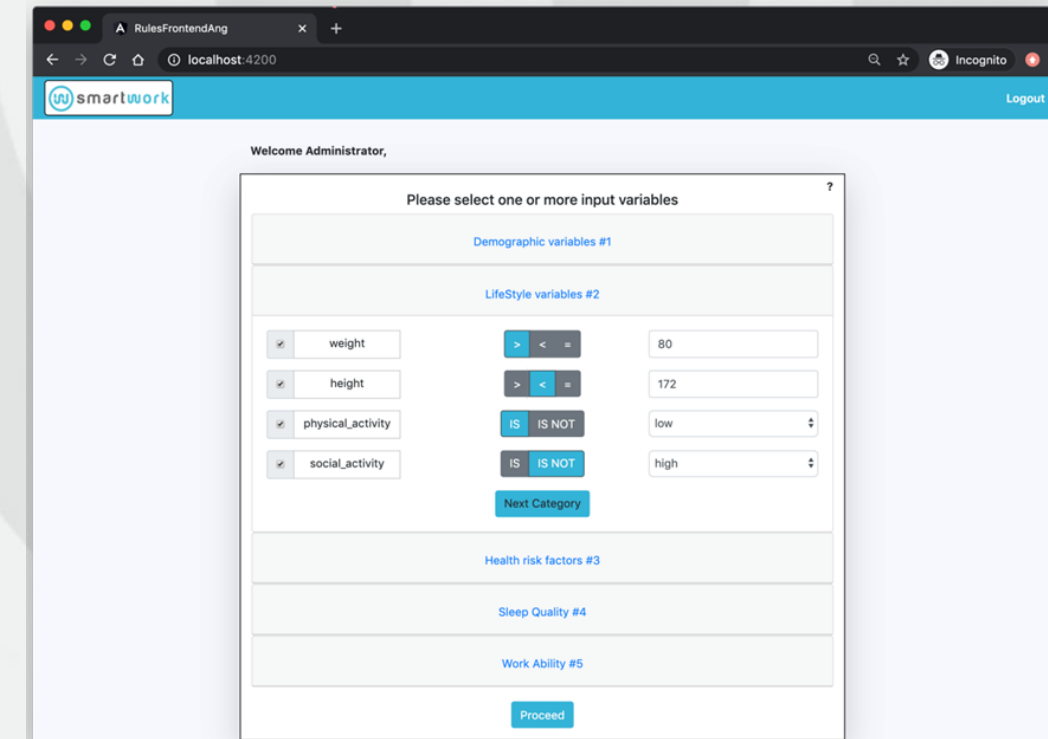
- Deployment of SmartWork initial sensing infrastructure
  - Intelligent mouse
  - Sleep and activity trackers
  - Weight scale
  - Environment sensing
  - ECG
- Implementation of low-level processing features
- Development of data security and privacy





## Major highlights (iii)

- Data ontology
- Cognitive modelling algorithm
- Definition of work ability framework
- Work on personalized and predictive models

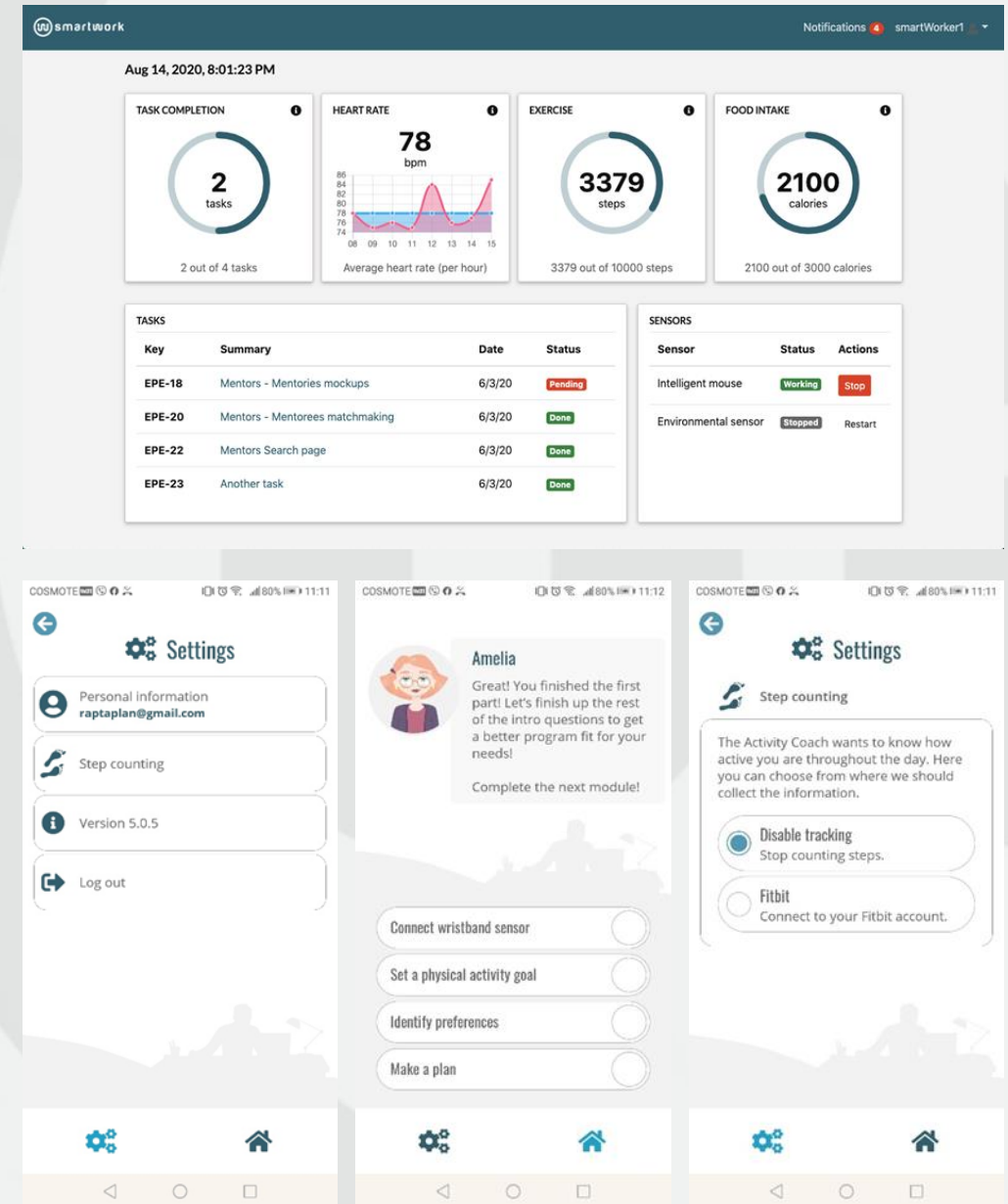



The screenshot shows the 'RulesFrontendAng' web application running on 'localhost:4200'. The interface is titled 'Welcome Administrator,' and displays a form titled 'Please select one or more input variables'. The form is organized into categories: 'Demographic variables #1', 'LifeStyle variables #2', 'Health risk factors #3', 'Sleep Quality #4', and 'Work Ability #5'. Under 'LifeStyle variables #2', there are four rows of variables: 'weight' (value 80), 'height' (value 172), 'physical\_activity' (value low), and 'social\_activity' (value high). Each row has a checkbox, a variable name, a comparison operator (>, <, =), and a value field. A 'Next Category' button is located below the lifestyle variables. A 'Proceed' button is at the bottom of the form.



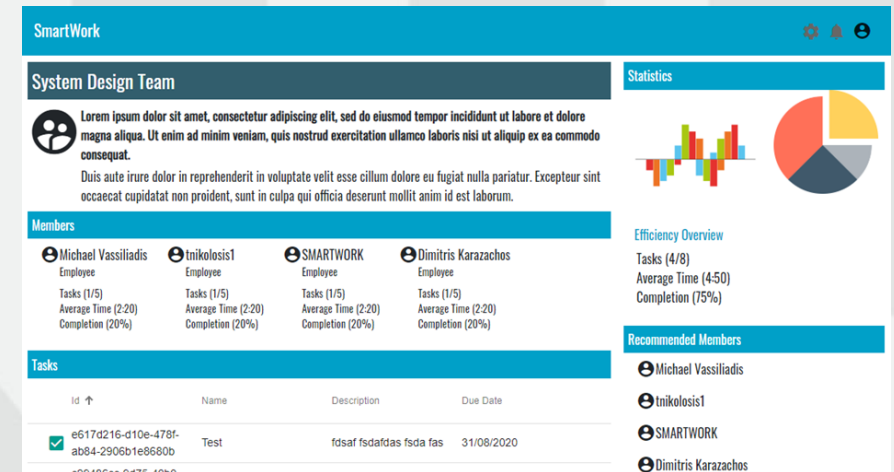
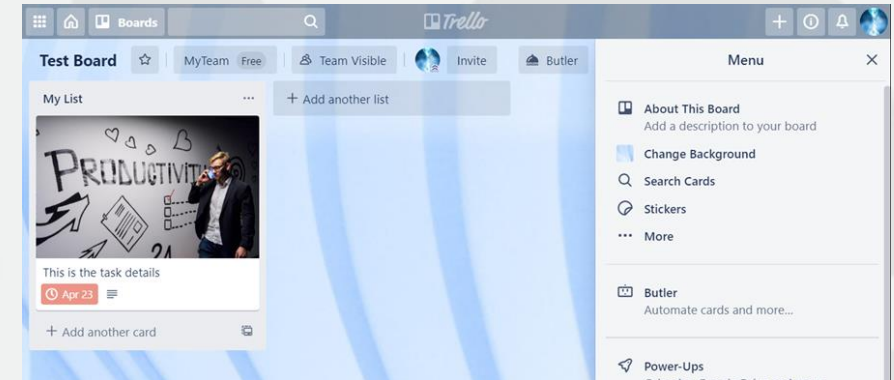
# Major highlights (iv)

- Development of UIs in co-creative iterative manner
  - 2-round interaction with the users
  - Wireframes
- First version of the auto-personalization infrastructure
  - Morphic
- First version of the AnyWhere Delivery features
- Actual Interfaces
  - CSS
  - Smartphone
  - Web



# Major highlights (v)

- Development of a Trello power-up module
- Implementation of team management features
- Implementations of training prioritizing module

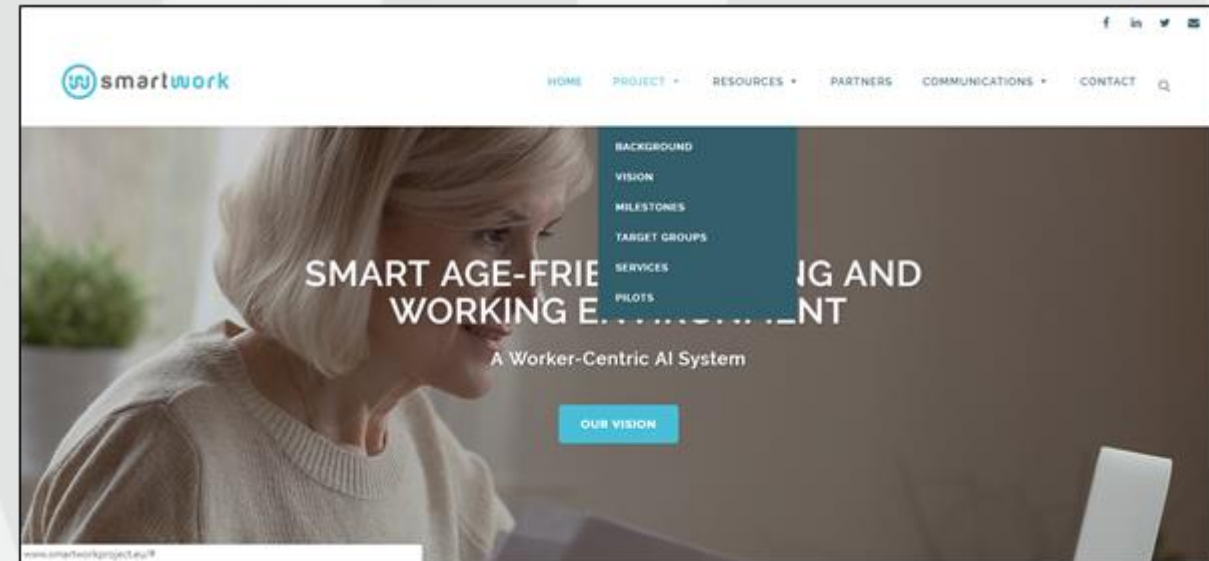


## Major highlights (vi)

- **Integration activities**
  - Towards the first integrated prototype
- **Acquisition of ethical approvals**
  - Ethics and safety report
  - Preparations of the pre- and pilot phase

## Major highlights (vii)

- **Several dissemination activities**
  - Web-site and social media
  - Blog articles and interviews
  - 3 newsletters
  - Participation in events
  - Scientific and non-scientific articles
  - Leading clustering initiative
  - COVID-19
- **Exploitation highlights**
  - IPR and innovation assessment framework
  - Exploitation workforce
  - Commercialization possibilities and market analysis



# Challenges

- **User engagement in the co-creation process**
  - Well-known approaches used
- **Adoption of AI-based solutions**
  - Focus on understandability. Enhance trust.
- **COVID-19 changed our way of work**
  - Creating also new opportunities

# What follows...

- **Completion of developments**
- **Integration of activities**
  - Release of two prototypes (M24, M32)
- **Pilot phases**
  - Pre-pilot (M22)
- **Sustainable exploitation**
- **Intensify our dissemination**
  - COVID era





# SmartWork Partners

SmartWork is a truly pan-European project and brings together a highly skilled and complementary consortium of ten expert organisations from across 8 countries. The consortium is well-balanced in terms of involvement from ICT industry, academia and research as well as public and non-profit organisations.



## Key contacts



**Project Co-ordinator**

Charalampos Vassiliou  
[cvassiliou@byte.gr](mailto:cvassiliou@byte.gr)



**Dissemination Co-ordinator**

Karolina Mackiewicz  
[karolina@echalliance.com](mailto:karolina@echalliance.com)



# Questions?

## Follow SmartWork



@SmartWorkEU



@SmartWorkEU



SmartWorkEU



[smartwork@echalliance.com](mailto:smartwork@echalliance.com)



# Thank You



Funded by Horizon 2020 Framework  
Programme of the European Union under  
Grant Agreement No. 826343

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#### Website

[www.smartworkproject.eu](http://www.smartworkproject.eu)





**FILIPPO CAVALLLO**





**TeNDER**

Annelore Hermann

**pharaon**

Filippo Cavallo



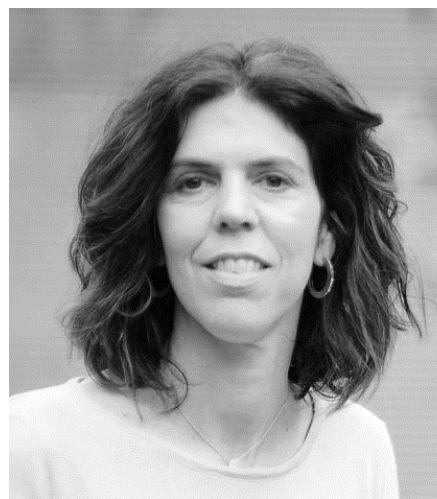
**smartwork**

Charalampos Vassiliou





**SILVIA URRA**





**Sustainable Housing supporting Health and Well-being\_ October 30<sup>th</sup>, 2020**

This project has received funding from the Horizon  
2020 Programme under Grant Agreement n°826295



# HOMES4LIFE



Certification for Ageing in Place

# ABOUT US



Project started in December 2018 – 24 months

9 partners from 5 EU countries

- TECNALIA | Spain (coordinator)
- TNO, Utrecht University | Netherlands
- Università Politecnica Delle Marche | Italy
- Certivéa and its subsidiary Cerway, R2M Solution | France
- ECTP, AGE Platform Europe, EUROCARERS | Belgium

# VISION 2040





# HOMES4LIFE VISION 2040



**Imagine a society where your house is truly your home. A supportive, enabling environment that helps you realize your full personal and social potential. Imagine a society where such houses are within reach for Europeans of all ages, regardless of income, gender, race or ethnic background, sexual orientation, health status, or disability. This is the vision Homes4Life supports for 2040.**



# A KEY PUBLIC POLICY BASED ON THREE ELEMENTS:

- All relevant stakeholders (construction sector, public authorities, ICT and care service providers, financial sector, owners) must be aware of the benefits related to Age Friendly Housing (AFH) and ready to implement an AFH strategy
- Appropriate tools and policy frameworks should be in place: regulatory/legal frameworks, housing stock structure and ownership (strong and non marginalized rental sector), housing governance (to meet future demand)
- All stakeholders need incentives appropriate to their needs and concerns: grants and tax credit/reduction for retrofitting and new age-friendly houses



# FACTORS INFLUENCING THE DEVELOPMENT OF AGE-FRIENDLY HOUSING

## Enabling – facilitators

- **Regulatory framework:** legal provisions for accessibility, home adaptation and home care services;
- **Existing know-how:** official guidance (e.g. handbooks, accessibility standards, etc.) and supportive organisations;
- **Financial incentives:** grants and tax credit/reduction for retrofitting and new age-friendly constructions;
- **Housing stock:** strong and non-marginalized rental sector (facilitating access to smaller dwelling i.e. flat);
- **Clear responsibilities:** analysis of housing market and planning to meet future demand; specific institutions designated to deliver.

## Disabling – obstacles

- **No clear regulatory framework**
- **Existing know-how:** absence or very limited know-how, or absence of knowledge transfer;
- **Little or no financial incentives** for property owners and/or individuals to adapt dwellings;
- **Housing stock:** weak and marginalized rental sector (emphasis on home-ownership → responsibility to individuals);
- **No clear responsibilities:** leads to competing priorities in housing.



## Growing need for age-friendly housing in all EU28 yet to different extent depending on:

- the structure of the housing market
- projected housing shortage
- urgency levels for adaptation



## Various maturity levels of age-friendly housing

as defined in the Homes4Life vision:

- awareness of the issue
- range of good practices to “age in place”
- range of resilient housing options
- structural operational readiness for change
- financial capacity to make the shift

**A tailored approach is needed!**



# HOMES4LIFE CERTIFICATION SCHEME





# H4L CS: PRINCIPLES > 2 BUILDING TYPES

Homes4Life Certification Scheme (CS) assesses residential buildings, be they individual or collective, and their immediate environment, including common spaces.



**Individual house:** single or semi-detached house containing only one dwelling unit.

**Collective building:** multi-storey building with multiple flats





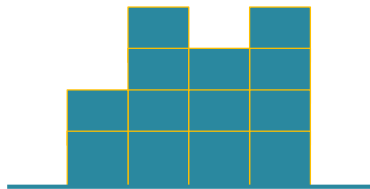
# H4L CS: PRINCIPLES > PERIMETERS ASSESSED

4 types of perimeter should be encountered

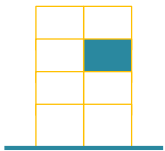
*A single house*



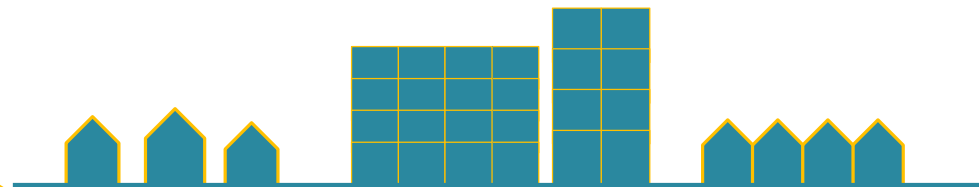
*A single collective building*



*A single flat in a collective building*



*A residential complex: housing development, private estate, with one or several kinds of building types*





# H4L CS: PRINCIPLES > 2 BUILDING SITUATIONS



## **Not in use yet**

*The building is in design phase, under construction or delivered, but not in use yet. This includes design and realisation of retrofitting, renovation or rehabilitation works.*



## **In use**

*The building exists, has been officially authorized to be occupied and is occupied.*



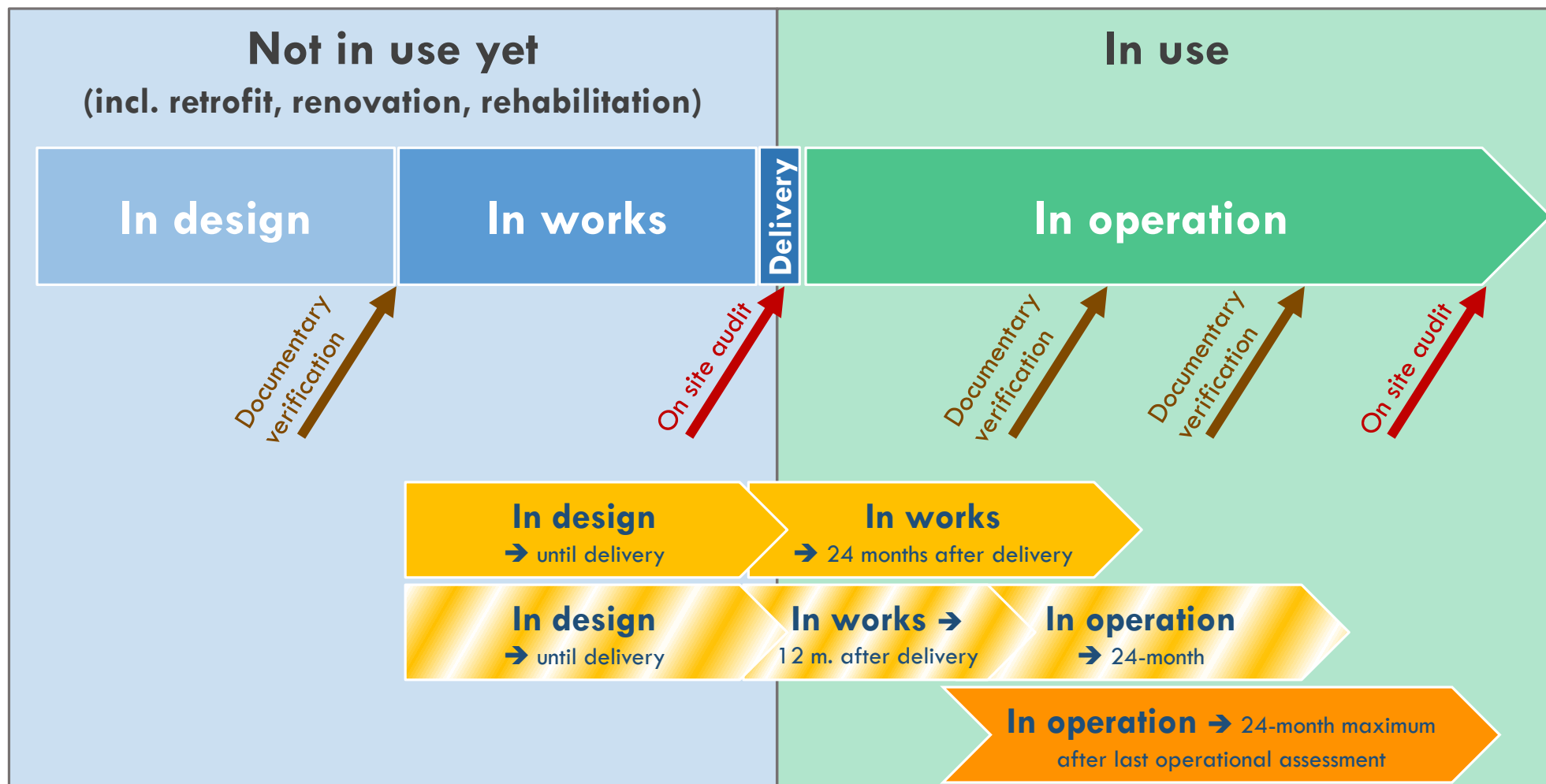
# H4L CS: CERTIFICATION PROCESS

**Building  
situation**

**Phases**

**Assessment**

**Validity of  
certificate**



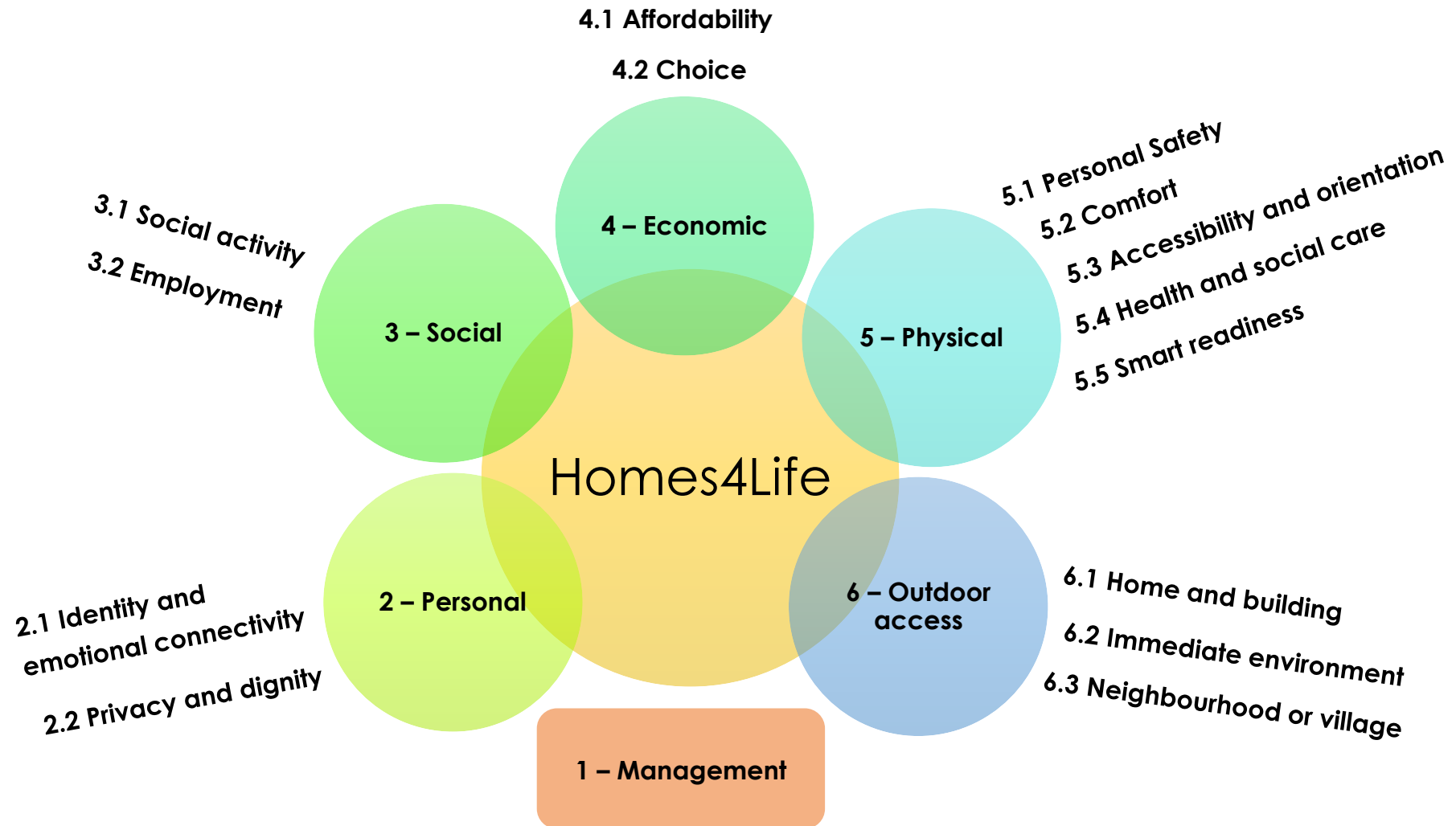
# H4L CS: STRUCTURE



**Taxo-  
nomy**

+

**KPI  
283**



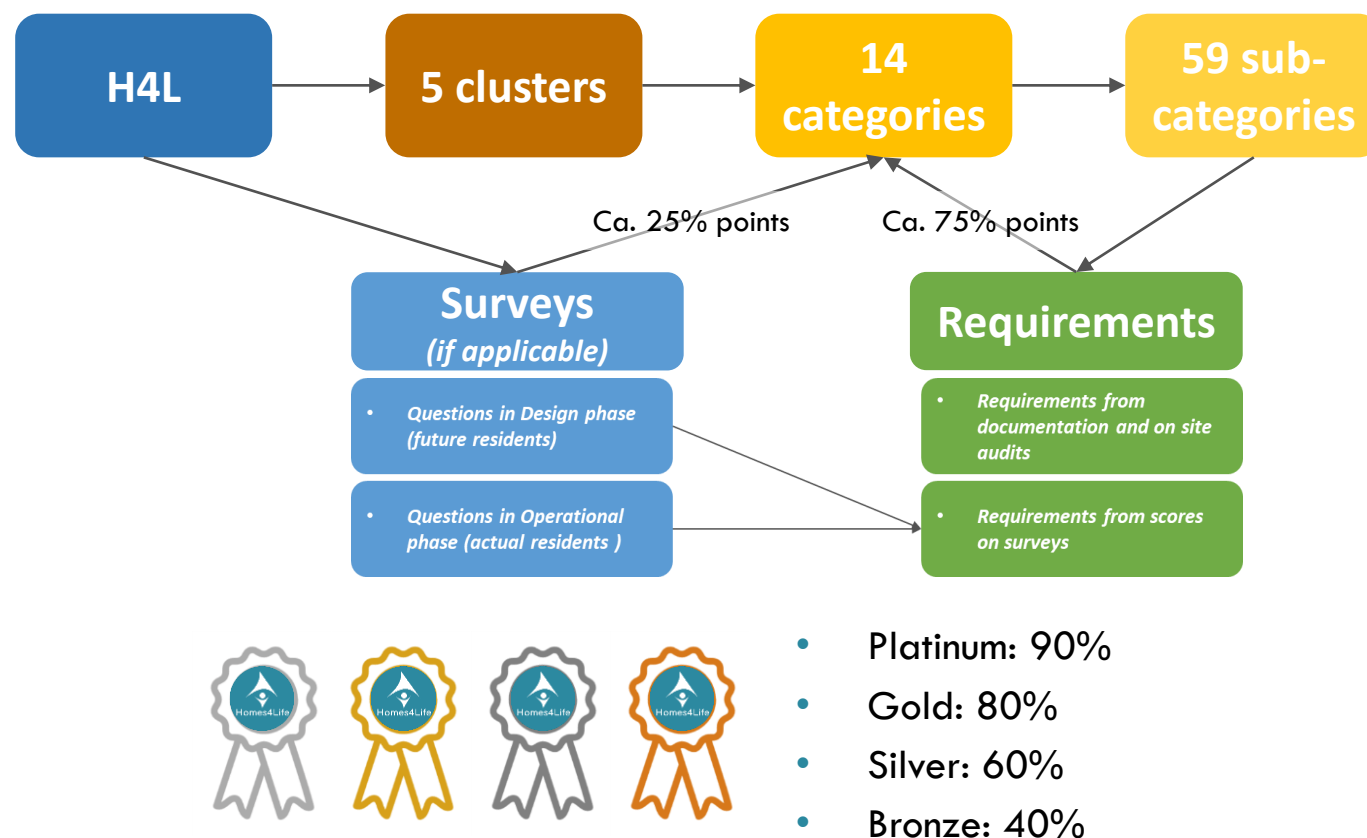
**Require-  
ments**

+

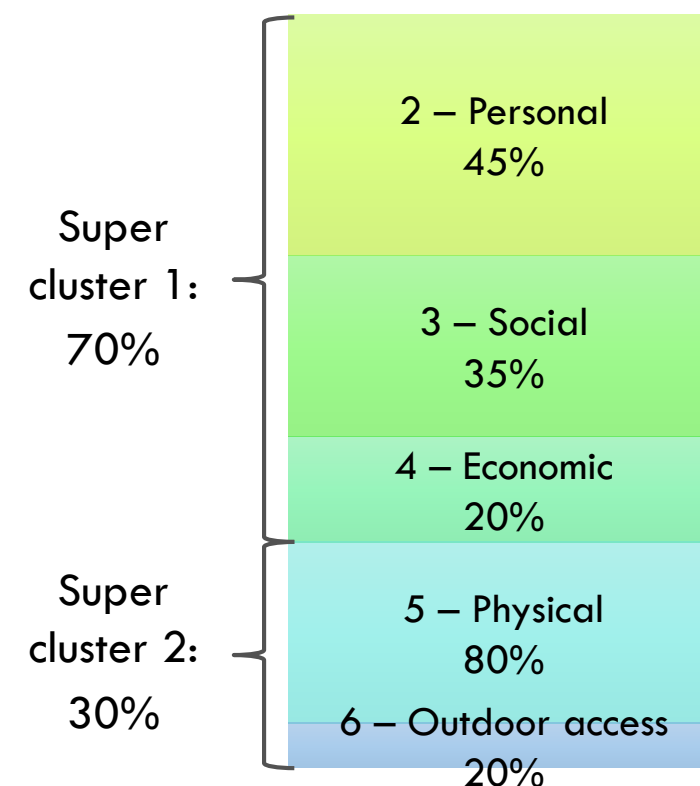
**Surveys  
(if applicable)**



# H4L CS: SCORING SYSTEM



## Share of score per cluster





# H4L CS: WHERE IS IT VALIDATED?

## Pilot sites

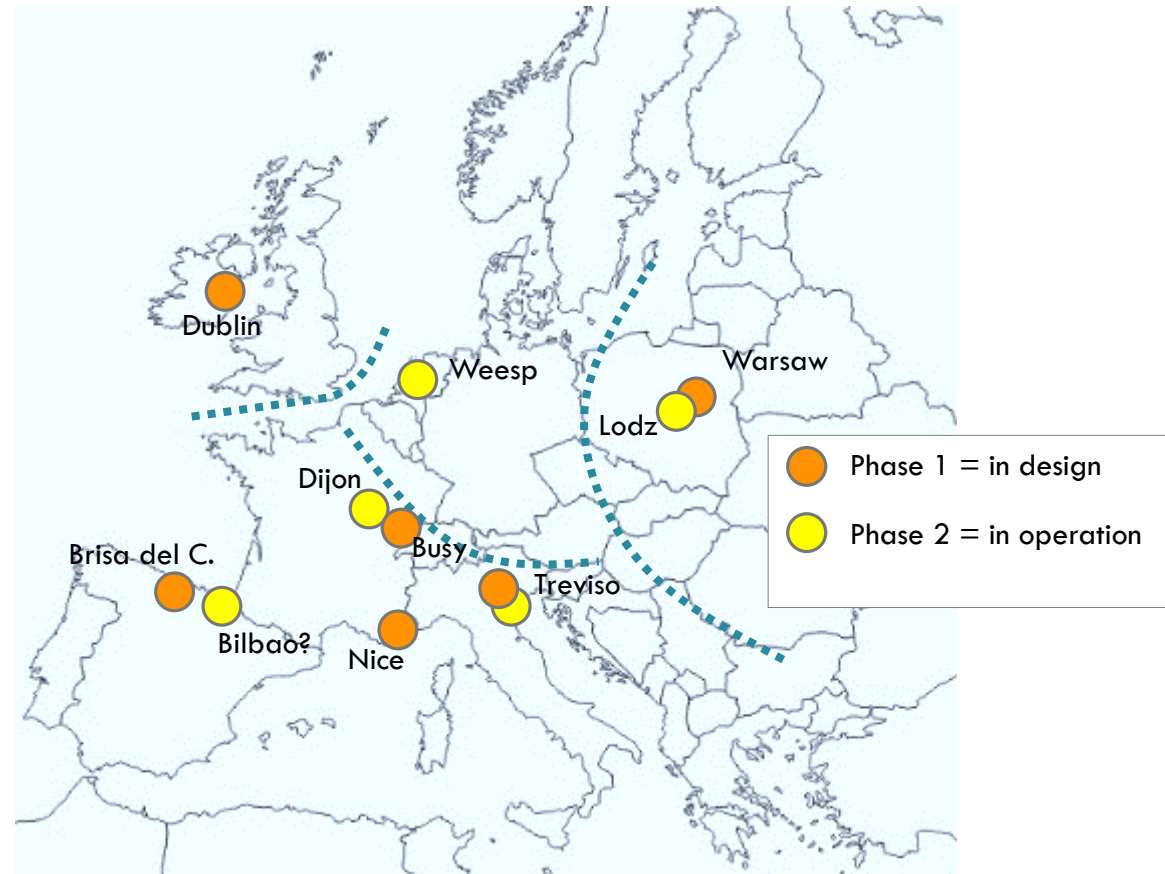
- 10/11 pilots in 4 European areas
- All building types
- Public or private organisations
- In design and in operation

## Test phases

- Phase 1: Spring 2020
- Phase 2: Autumn 2020

## Call for comments

- At the end of each phase: improvements to the CS
- Call for comments





# HOMES4LIFE BROCHURE (1/3)



## AGE-FRIENDLY HOUSING TO SUPPORT HEALTH AND WELL-BEING



**Homes4Life**

EUROPEAN CERTIFICATION FOR AGEING IN PLACE



Homes4Life is a project which received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 824295.

## THE NEED FOR AGE-FRIENDLY HOUSING

Besides the wish of people to live independently in their homes, age-friendly housing offers many benefits.

- Age-friendly housing means good health.
- Age-friendly housing keeps people and care services away from institutions.
- Age-friendly housing empowers informal carers.
- Investing in citizens' health makes social and economic sense.
- Age-friendly housing contributes to Europe's headline ambitions.

Read the Homes4Life 2040 vision on age-friendly housing at [www.homes4life.eu](http://www.homes4life.eu)

**27,1%**

of EU citizens will be over 65 in 2040.  
9,2% will be over 80.

**one in eight**

of Europeans over 65 declare that their house is not comfortably warm during winter.

**10 million**

the estimated demand for age-friendly homes in the upcoming years across the continent.

**x2**

Public expenditure for long-term care is set to double by 2070. Age-friendly housing can help people receive care in their own homes and familiar environs.

\* See the Homes4Life Desktop research Report at [www.homes4life.eu/deliverables](http://www.homes4life.eu/deliverables)



The holistic approach of the Homes4Life certification scheme ensures needs of people who wish to age in place are recognised and addressed in the context of their wider social, economic and personal needs and preferences."

Nadia Kamel, EUROCARERS

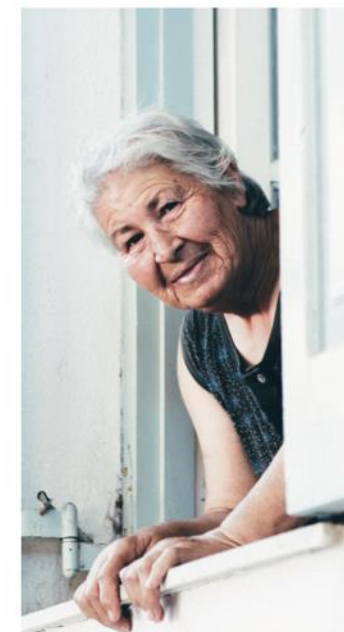
The European Association Working for Carers

Our living environments have a tremendous impact on our health and wellbeing.

Ensuring their suitability and adaptability to people's needs and preferences – including when these evolve over time – is one of the most effective approaches to respond to challenges brought to us by Europe's ageing demographics. However, a huge share of the building stock is not adapted to permit ageing in place. Even today's new constructions are often not prepared to support health and wellbeing over the life course.

Homes4Life is a European certification scheme based on an inspirational and realistic vision of people's needs and requirements in a life-course approach. The certificate builds both on the potential of well-designed construction and digital solutions, for more resilient dwellings.

The Homes4Life certificate has been successfully tested in 10 pilot sites throughout Europe. Learn about their experience on [www.homes4life.eu](http://www.homes4life.eu)



# HOMES4LIFE BROCHURE (2/3)



## THE BENEFITS OF AGE-FRIENDLY HOUSING

Our homes should be a place that

- supports our independence and autonomy;

- allows us to remain active and healthy;
- promotes our social inclusion and engagement within our communities;
- respects our lifestyle choices and evolving needs as the years go by.

A Homes4Life-certified dwelling encompasses all these dimensions.

**Age-friendly housing is relevant for all citizens as it impacts on our health and wellbeing, our social interactions and capacity to participate in community life.**

Homes4Life supports the vision of a society where people have the opportunity to pick the place they want to live in and grow older. A society where age-friendly housing is available, accessible and affordable to all.



Homes4Life will enable rethinking the construction sector practices towards a built environment that is resilient against social and demographic changes, thanks to its Certification Scheme leveraging on digital technologies to empower Europe's built assets with new service-based functionalities."

Alain Zarli, Secretary-General of the European Construction Technology Platform (ECTP)

### Interfaces with other building certifications

Homes4Life works hand in hand with the HQE certification, the Accessibility label, and Ready2Services delivered by Cerway, to demonstrate the overall performance of your building assets.

## A COMPREHENSIVE EVALUATION FRAMEWORK DESIGNED AROUND 6 STRATEGIC CLUSTERS

The 6 clusters cover an in-depth and holistic analysis of what a home and its components need to fulfil to create and maintain an age-friendly environment that is enabling, fit for purpose, flexible and resilient.



### PHYSICAL

Personal safety - Comfort - Accessibility and orientation - Health and social care - Smart readiness



### ECONOMIC

Affordable housing - Affordability for informal carers - Long-term security on cost of housing - Choice: availability of housing programmes and resources, etc.



### PERSONAL

Identity and emotional connectivity - Privacy and dignity



### SOCIAL

Social activity; ability to have social contact in home, proximity to activities and facilities, online connectivity; Employment: suitability of the home as a place to work, connection to a place of employment, etc.



### OUTDOOR ACCESS

Home and building - Immediate environment - Neighbourhood or village



### MANAGEMENT

Commitment - Analysis of the site - Involvement of stakeholders - Surveys

## HOMES4LIFE CAN BE APPLIED BOTH AT DESIGN, CONSTRUCTION, AND IN-USE PHASES

### DESIGN & CONSTRUCTION

Make sure your future building is designed according to Homes4Life requirements

### IN-USE

Evaluate your current age-friendliness level and get recommendations on how to make it even better

## THE BENEFITS OF HOMES4LIFE CERTIFICATION

### WHO IS CONCERNED ?

Are you interested in developing age-friendly housing? In refurbishing homes so that they better support health and well-being over the life course? Whether you are a residential property developer, a public authority, a social housing organisation or a committed citizen, Homes4Life is designed for you.

### WHICH HOMES ARE ELIGIBLE?

The certification scheme is inclusive in its design and can be applied to both new and existing buildings (be it detached houses, multi-residential buildings, or individual flats) and regardless of the tenureship model.

**HIGHLIGHT YOUR COMMITMENT AND INVESTMENTS INTO AGE-FRIENDLY HOMES THROUGH A CERTIFICATION PROCESS THAT ENSURES A TRANSPARENT, EXTERNAL EVALUATION AND RECOGNITION.**

### PROPERTY DEVELOPERS

- Meet the growing demand for age-friendly homes due to European demographic projections
- Increase the market value of your properties
- Add new housing models to your portfolio aligned with current social trends

### HEALTH AND SOCIAL CARE PROVIDERS

Improved quality of houses is reflected in a better work environment for home-care workers, contributing to increase their job satisfaction, physical health and propensity to stay with the organisation, while minimizing stress levels

### HOMEOWNERS

- Increased inhabitants' quality of life and wellbeing
- Improved sense of comfort and safety at home
- Increased value of your property; additional argument for renting



# HOMES4LIFE BROCHURE (3/3)



## HOMES4LIFE SERVICES: ADEQUATE SOLUTIONS FOR EACH PHASE OF YOUR PROJECT

Homes4Life is a collaborative, scalable and open approach. Join the Homes4Life community to keep up to date with the latest best practices, and communicate with other stakeholders engaged into the development of age-friendly housing.



### HOMES4LIFE EVALUATION

Explore the Homes4Life evaluation framework in its entirety. Evaluate your age-friendly performance with our ISIA online platform on all evaluation criteria from the 6 strategic clusters. Determine your strength, areas for improvement, and prepare your certification request.



### HOMES4LIFE CERTIFICATION

Demonstrate your commitment to the development of age-friendly housing, through an external and independent certification. Promote your actions addressing the health, demographic change and well-being societal challenge.

- Formalise your certification request
- Conduct your self-evaluation on the ISIA online platform
- Provide required elements to demonstrate your performance
- Benefit from external advice and guidance during the on-site audit of your building
- Communicate your achievements when your certification is awarded



### HOMES4LIFE TRAINING

Get trained in the holistic Homes4Life approach and methodology, in order to progress and further develop age-friendly housing that support health and well-being.

You can expect benefits for everyone !

## CONTRIBUTE TO MAKE OUR HOMES RESILIENT TO OUR LIFE CHANGES. BUILD LIVING ENVIRONMENTS THAT MAINTAIN WELLBEING AS WE AGE.

Our certification comes with a communication package for every awarded client. It includes an official certificate, a promotional plate and poster, and customised reports.



The Homes4Life certification provides a much-needed common language for civil society organisations, policy-makers, and professionals of the construction sector to build together a more inclusive housing market."

Estelle Huchet, AGE Platform Europe,  
The European network of older persons



**Homes4Life**

[www.homes4life.eu](http://www.homes4life.eu)

EUROPEAN CERTIFICATION FOR AGEING IN PLACE

Are you interested to deliver the Homes4Life certification?  
Contact us at [certification@homes4life.eu](mailto:certification@homes4life.eu)

HOMES4LIFE IS  
DELIVERED BY  
THE FOLLOWING  
EUROPEAN  
CERTIFICATION  
BODIES

CERWAY  
+33 140 50 28 85  
[cerway@cerway.com](mailto:cerway@cerway.com)

TECNALIA CERTIFICACIÓN  
+34 678 86 08 22  
[eva.sanchez@tecnaliacertificacion.eu](mailto:eva.sanchez@tecnaliacertificacion.eu)

# HOMES4LIFE COMMUNITY OF INTEREST



Join the Homes4Life Community of Interest to keep in touch with us:

- Receive updates about our project progress (recently released public reports, etc.)
- Be invited to workshops or events organised by our partners
- Receive opportunities to contribute the Homes4Life certification scheme development (call for comments, pilot testing phase, etc.)



Photo credit : Unsplash

## Homes4Life Community of Interest

This audience has **139** contacts. **137** of them are subscribers.

My expectations · [Edit](#)

Checkboxes · [Delete](#)

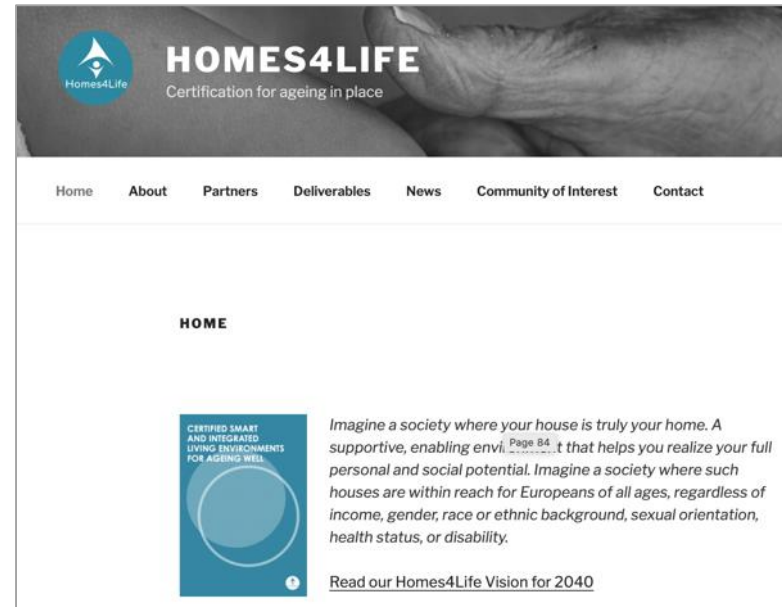
⋮ Be informed about the project progress and achievements · [Edit](#)  
[128 contacts](#)

⋮ Contribute to the certification scheme development · [Edit](#)  
[72 contacts](#)

⋮ Test the future certification scheme · [Edit](#)  
[59 contacts](#)

<http://www.homes4life.eu/community-of-interest/>

# STAY IN TOUCH & COOPERATION



Website : [www.homes4life.eu](http://www.homes4life.eu)



**To discuss dissemination,  
communication &/or exploitation  
opportunities:**

[regis.decorme@r2msolution.com](mailto:regis.decorme@r2msolution.com)



**Deliverables available on** <http://www.homes4life.eu/deliverables/>  
[Silvia.urra@tecnalia.com](mailto:Silvia.urra@tecnalia.com)

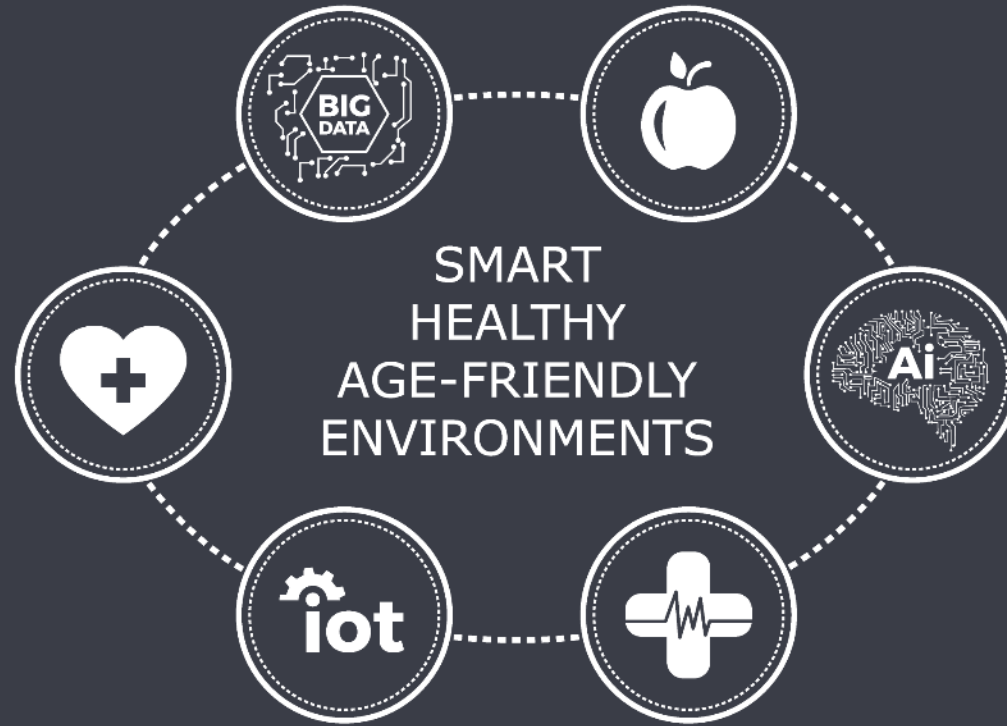
THANK YOU FOR YOUR ATTENTION!





**CARINA DANTAS**





STAKEHOLDERS NETWORK

**SHAFE**

A new concept was created since 2017, based on the desire to implement **Smart Healthy Age-Friendly Environments (SHAFE)** across Europe, fostering happier and healthier people in all communities.

This idea took shape and became a solid movement. That is how SHAFE was born and further launched in 2018, by Caritas Diocesana de Coimbra and AFEdeemy, in close cooperation with several European organisations.

#### COORDINATORS



#### MAIN PARTNERS



European Innovation  
Partnership on Active  
and Healthy Ageing



Towards  
an Age-Friendly  
Europe  
Governance on Demographic Change



SHAFE began as a Thematic Network, approved by the European Commission, with the ambition to draw policy makers, organisations and citizens' attention to the need of better alignment between health, social care, built environments and ICT, both in policy and funding.

The conclusions of this extensive work in 2018, gathering over 160 organisations as partners, was delivered to the European Commission and Member States in a Joint Statement and a Framing Paper in December 2018.

After this, SHAFE evolved to a European **Stakeholders Network**, which is currently working to achieve better COOPERATION and IMPLEMENTATION, as the major challenges for this next period.

## ASSOCIATED PARTNERS

## ~170 ORGANISATIONS



# JOINT STATEMENT ON SMART HEALTHY AGE-FRIENDLY ENVIRONMENTS



**A SHARED VISION**



**NEEDS**



**FUNDING** / CONDITIONS  
FOR IMPLEMENTATION



**CITIZEN  
EMPOWERMENT**



**COOPERATION**  
COMMUNICATION



**RESEARCH** FOR  
PREDICTION / PREVENTION

# RECOMMENDATIONS TO CITIZENS



**WE EXPECT YOU TO  
PARTICIPATE**



+ HEALTH LITERACY



+ ADAPTED ENVIRONMENTS



+ PHYSICAL EXERCISE



+ ACTIVE CITIZENSHIP

**CITIZEN  
EMPOWERMENT**



**COOPERATION**

**IMPLEMENTATION**



**TASK FORCE SHAFE?**

**POSITION PAPER 2020**

# THE CHALLENGE

## SHARED RESPONSIBILITY ON COMMON GOOD

To live and participate in society as inhabitant, worker or volunteer, it is necessary that working and living environments are usable, accessible and reachable. No matter if someone walks, drives, uses a walker or wheelchair, or is having hearing or vision problems.

With the ongoing digitization of society, new opportunities arise to foster these living and working environments. Also, digital solutions could assist to better prevent from non-communicable diseases, and to promote independent living, work till older age, favoring more health and wellbeing.

# However, single digital solutions are not the panacea to all issues:

## **CITIZENS** need to improve:

- digital skills
- health literacy
- engagement and democratic participation
- Less inequalities on access

## **ENVIRONMENTS** have as major challenges:

- house retrofitting
- digital infrastructures
- public spaces and transport
- climate neutral solutions (in the area of environments)

## and, finally, **HEALTH AND CARE** need:

- reliable and accessible big data
- integrated and person-centered solutions (new pathways)
- implementation guidelines and long-term funding solutions/business models

**We acknowledge that all these challenges are interconnected and that a global approach is needed!**

A faint, light gray map of Europe is visible in the background, centered behind the text. The map shows the outlines of the major landmasses of Europe, including the British Isles, Scandinavia, and the Mediterranean region.

**This was already the path used to conceive and deliver the**

**JOINT STATEMENT ON SHAFE**

**SMART HEALTHY AGE-FRIENDLY ENVIRONMENTS, in 2018.**



## MAIN GOALS

By 2022, the Stakeholders Network on SHAFE aims to achieve mainly **COORDINATION** and **IMPLEMENTATION**, specifically the following higher-level goals:

- Promote **training of formal and informal caregivers** (communities) on SHAFE, creating a toolkit and implementing training actions in multiple countries;
- Raise awareness on the need to coordinate Health and social care, building infrastructure and environment conditions in order to move aging and wellbeing towards home care and prevention – to a **Health and Wellbeing value-based approach**;
- Jointly develop **sustainable business cases** with governments, insurance companies and investors to foster future investments on smart healthy environments;



## MAIN GOALS

- **Modernise education** of urban planners, architects and ICT-developers in general to focus on PEOPLE and PLACES and focus research on lifelong learning, evidence-based design, smart healthy environments and empowerment;
- **Support public authorities and health and social care providers on implementing SHAPE**, especially regarding building or restructuring the built environment to include ICT solutions with integrated health and care provision.

## How to scale-up and implement SHAFE?

### 7 POLITICAL MEASURES TO IMPLEMENT IN REGIONS / MS

#### **Policy makers**

What financial incentives can you approve to foster the implementation of SHAFE?

#### **Insurance companies**

What measures can be included in insurance packages that foster SHAFE?

#### **Citizens**

What commitment is fair to ask on taking the lead on healthy habits and digital&health literacy?

#### **Financers**

What measures do you need to invest or develop SHAFE?

#### **Health & care providers**

What measures are lacking to implement SHAFE and what can you contribute?

#### **Researchers/Academia**

what can you bring on lifelong learning/digital skills and research for prevention?

#### **Building industry**

What can you bring and what you need to integrate smart built environments?





---

## PROJECTS/NETWORKS BASED ON **SHAFE**



# SHAFE being IMPLEMENTED





# REDE PORTUGUESA AMBIENTES SAUDÁVEIS, INTELIGENTES E AMIGÁVEIS



# International Interdisciplinary Network on Smart Healthy Age-friendly Environments

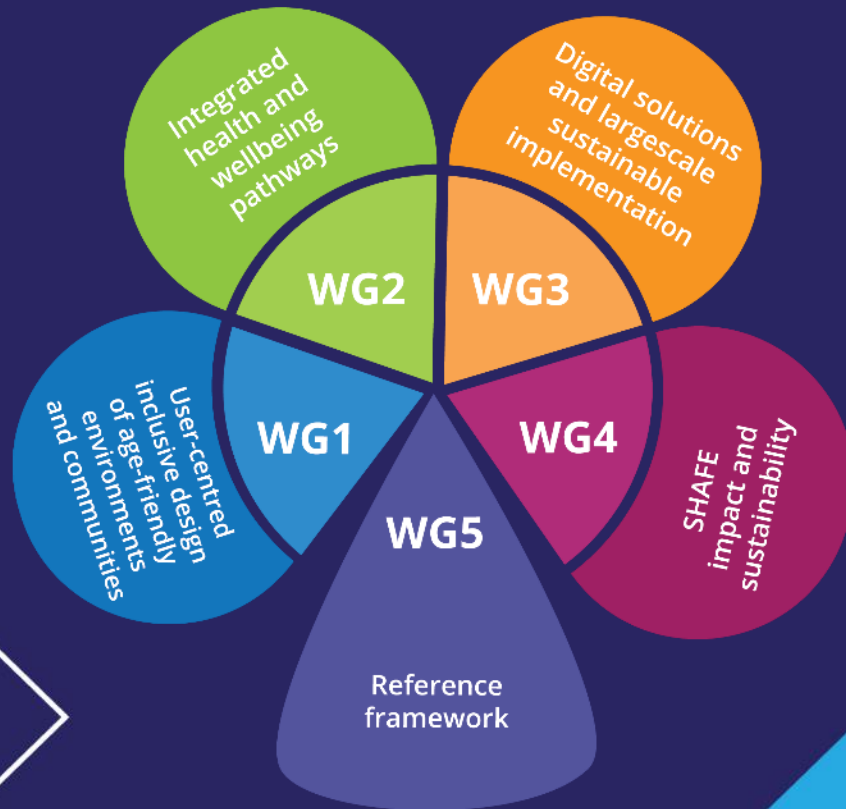
**NET4**  
age-friendly

 **cost**  
EUROPEAN COOPERATION  
IN SCIENCE & TECHNOLOGY



Establishment of local or regional ecosystems to work on  
**health & wellbeing in an age-friendly digital world.**

With citizens, public authorities, businesses, NGOs and researchers.  
They will be supported by 5 **Working Groups**.





**MANAGEMENT COMMITTEE**  
**68 MEMBERS**

**FULL NETWORK**  
**213 researchers**



Hands-on  
**SHAFE**

**COORDINATOR:**



**PARTNERS:**



Warsaw University  
of Technology



Co-funded by the  
Erasmus+ Programme  
of the European Union

# ABOUT THE PROJECT

Hands-on SHAFE aims to deliver informal learning experiences and hands-on tools to implement SMART and HEALTHY BUILT environments or to develop BUSINESS in this area.

It especially targets to:

- improve people's skills - especially with low qualifications and / or vulnerabilities
- create online training programs for informal learning and practical tools
- create community facilitators that foster healthy and friendly environments in their own homes and neighborhoods.



**SMART**



**HEALTHY**



**BUILT**



**BUSINESS**





# EU\_SHAFE

Interreg Europe

## COORDINATOR:



## PARTNERS:



European Union  
European Regional  
Development Fund

# ABOUT THE PROJECT

The EU\_SHAFE project will improve policies and practices in **7 European regions** by developing a comprehensive approach to **Smart Healthy Age-Friendly Environments (SHAFE)**.

Through a 'learning by sharing' methodology, this robust multidisciplinary and intersectoral consortium will build a **quadruple-helix European community** to exchange experiences and practices to improve **multilevel policy instruments**.





# SMART CITIES

and the

## Ageing Challenges

Dialogue between different knowledge areas, contexts and actors

- 2 NGOs | CDC, SCMA
- 2 Universities | UC, UBI
- 1 Business | Glintt

*"In smart cities the citizens activities are not limited to their homes; they live their lives in an entangled society".*



4 AREAS

3 LAYERS

8 ACTIONS



The pre-validation pilot is already ongoing in Coimbra, with

Office workers 55+

Employers

Caregivers

In real environments, in order to co-create and evaluate the SmartWork system.



Aims to deliver personalised integrated (health and social) care services, better outcomes for older people and improved care experience.

It also aims to improve staff satisfaction and greater efficiency in the use of resources and coordination of care.

Enhance the experience  
of older people through  
innovative digital  
solutions

Improve the  
satisfaction of  
multidisciplinary care  
teams

Use resources more  
efficiently through  
improved  
coordination

Improve care outcomes  
and maintain quality of  
life for older people  
with frailties





Cons@elhos Repórteres 55+ promotes the active participation of older and isolated people in local community transformation, in order to create better conditions for active aging.

In a snowball methodology, the project trains mentors at the local level, who then create their groups of 55+ reporters in different communities to survey the conditions that need to be improved for their quality of life, such as accessibility, transportation, access to health services, cultural activities, etc.

In the end, it will help these groups of reporters to summarize their needs and proposals for improvement and present them to the competent authorities and / or mobilize possible solutions, in a true exercise of citizenship.





## ACTIVAS Built Environments for an Active, Safe and Healthy Life

This multidisciplinary project promotes a disruptive response to the ageing challenges, in terms of environment, cities, and buildings, creating new opportunities for economic agents from various sectors.

In short, the main goal is to achieve and validate an assisted environment “Active, safe and healthy life” based on a pilot that will integrate solutions developed for new environments and spaces – personalized lifelong health, including:

- Building materials
- Robots
- Furniture
- Domotics
- Sensors
- Platforms

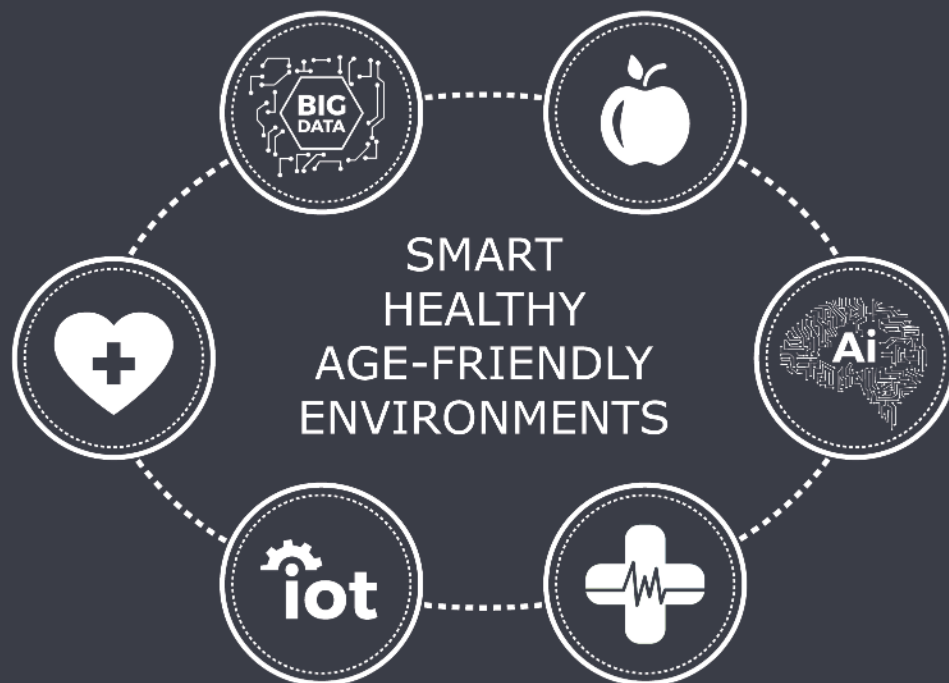




# THANK YOU!



Carina Dantas



**Caritas Diocesana**  
de **COIMBRA**







Silvia Urra



Carina Dantas





**IRINA KALDERON-LIBAL**





# Active and Healthy Ageing in smart living environments: EC perspective

## Sustainable Places Conference

Irina Kalderon Libal

Policy Officer

DG CNECT H.3

‘eHealth, Wellbeing and Ageing’

*30/10/2020*

# Digital Health and Care



TRANSFORMATION OF HEALTH AND CARE IN THE DIGITAL SINGLE MARKET - Harnessing the potential of data to empower citizens and build a healthier society

## European health challenges

- ⊗ Ageing population and chronic diseases putting pressure on health budgets
- ⊗ Unequal quality and access to healthcare services
- ⊗ Shortage of health professionals

## Potential of digital applications and data to improve health

- ✎ Efficient and integrated healthcare systems
- ✎ Personalised health research, diagnosis and treatment
- ✎ Prevention and citizen-centred health services

## What EU citizens expect..

90%  
agree

To access their own health data  
(requiring interoperable and quality health data)

80%  
agree

To share their health data  
(if privacy and security are ensured)

80%  
agree

To provide feedback on quality  
of treatments

## Support European Commission:

1

### Secure access and exchange of health data

#### Ambition:

Citizens can securely access and share (e.g. with doctors or pharmacies) their health data anywhere in the EU.

#### Actions:

- eHealth Digital Service Infrastructure will deliver initial cross-border services (patient summaries and ePrescriptions) and cooperation between participating countries will be strengthened.
- Proposals to extend scope of eHealth cross-border services to additional cases, e.g. full electronic health records.
- Recommended exchange format for interoperability of existing electronic health records in Europe.



2

### Health data pooled for research and personalised medicine

#### Ambition:

Shared health resources (data, infrastructure, expertise...) allowing targeted and faster research, diagnosis and treatment.

#### Actions:

- Voluntary collaboration mechanisms for health research and clinical practice (starting with "one million genomes by 2022" target).
- Specifications for secure access and exchange of health data.
- Pilot actions on rare diseases, infectious diseases and impact data.



3

### Digital tools and data for citizen empowerment and person-centred healthcare

#### Ambition:

Citizens can monitor their health, adapt their lifestyle and interact with their doctors and carers (receiving and providing feedback).

#### Actions:

- Facilitate supply of innovative digital-based solutions for health, also by SMEs, with common principles and certification.
- Support demand uptake of innovative digital-based solutions for health, notably by healthcare authorities and providers, with exchange of practices and technical assistance.
- Mobilise more efficiently public funding for innovative digital-based solutions for health, including EU funding.

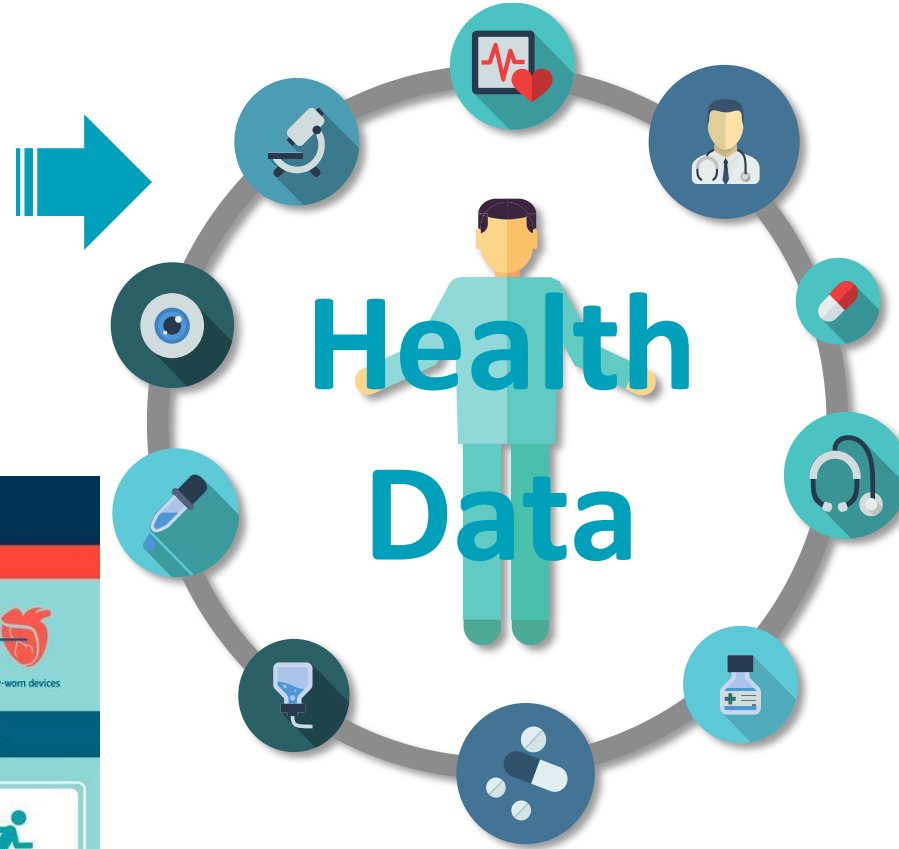


## Ambition:

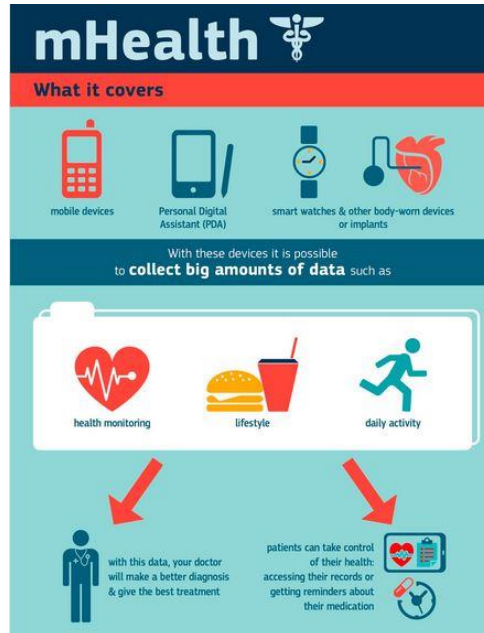
Citizens can monitor their health, adapt their lifestyle and interact with their doctors and carers (receiving and providing feedback).

## Horizon 2020

**DG CNECT** has funded more than 180 R&I projects through [Horizon 2020](#) under Societal Challenge 1 'Health, demographic change and wellbeing'.



**3** Digital tools and data for citizen empowerment and person-centred healthcare





# H2020 Calls: Societal Challenge 1 – Health, Demographic change and Wellbeing

- SC1-DTH-04-2020: International cooperation in smart living environments for ageing people
- SC1-HCC-08-2020: Scaling up innovation for active and healthy ageing
- DT-TDS-01-2019: Smart and healthy living at home
- SC1-DTH-03-2018: Adaptive smart working and living environments supporting active and healthy ageing
- SC1-HCC-01-2018: Supporting investment in smart living environments for ageing well through certification



## WHO

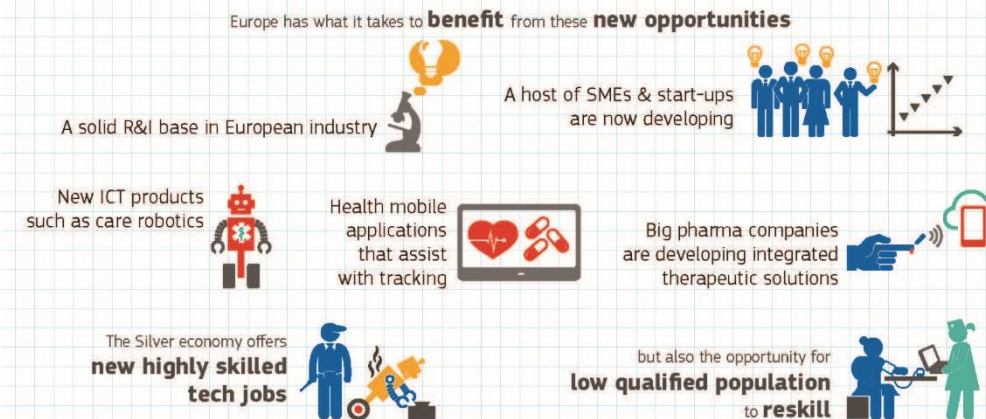
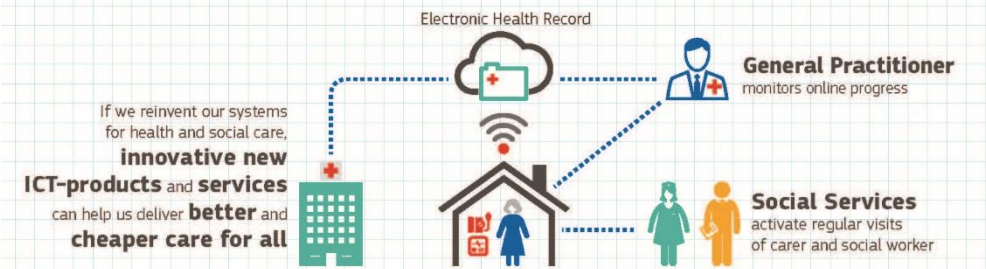
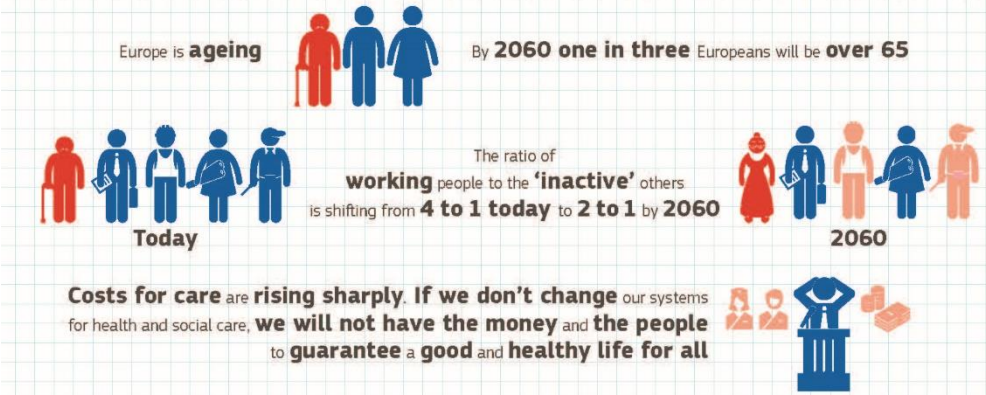
A unique public-public partnership of 26 public funding agencies:

- From currently 20 countries around Europe plus Canada
- R&D, innovation, health & regional support focus

## WHY:

1. Enhancing older adults' quality of life through innovative digital technology-based solutions
2. Support long-term sustainability of health & care systems
3. Strengthening the emerging industrial base in Europe

# The Silver Economy



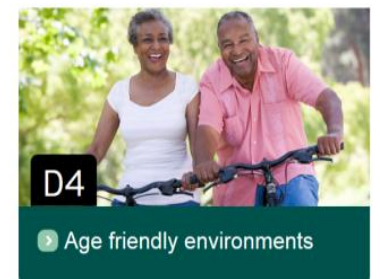
# European Innovation Partnership on Active and Healthy Ageing

- *Launched to increase the average healthy lifespan by two years by 2020 and to pursue a Triple win for European citizens*
- *103 Reference Sites to scale up innovation for active and healthy ageing*
- *Twinning Schemes*



European Innovation  
Partnership on Active  
and Healthy Ageing

## 6 ACTION GROUPS





# Report on the Impact of Demographic Change in Europe

1

In 2018, life expectancy at birth increased to **78.2 YEARS** for men and **83.7** for women.



This growth is projected to continue: men born in 2070 are expected to live **86 YEARS**, and women **90**

2

In 2018, the average number of childbirths per woman was **1.55** and their median age at childbirth **31.3**.



3

**By 2070...**  
the share of people **65 years or older** is projected to be



**30.3%**  
(compared to 20.3% in 2019)



the share of people **80 years or older** is projected to be **13.2%** (compared to 5.8% in 2019)



# Report on the Impact of Demographic Change in Europe

4

In the EU as a whole, the composition of our households is changing – households composed of two parents with children are being joined by households consisting of people living alone, single parents or couples without children.



5

Some of us opt to move around or live abroad, but the size of these flows is volatile and can change quickly.



**The Commission's Demography Report** presents the main drivers of demographic change and the impact they are having across Europe. It launches a process that will help identify concrete actions and solutions, mindful of lessons learned from COVID 19, to support people, regions and communities that are most affected and to enable them to adapt to changing realities.

6

The share of Europe's population in the world is shrinking and by 2070 it will account for just about **4%** of the world's population.





# NEXT STEPS

- **Council Conclusions on** Human rights, participation and well-being of older persons in the era of digitalization (09 October 2020, German Presidency)
- **Green Paper on Active Ageing** (January 2020)
- **Vision on Rural areas** (April 2020)
- **New MFF**

# NEXT Multi-annual Financial Framework

- **Structural funds** (ESIF/ERDF) - supports the deployment of digitally enabled health and care solutions beyond pilot/proof of concept stage. A mapping of the investments in Health and eHealth for 2014-2020 is available [here](#).
- **Horizon Europe** partnership: “Transforming health and care systems”
- **EU4Health**
- **Renovation Wave Strategy** – Smart, green and sustainable housing
- **Recovery and Resilience Plan** – 750 Billion EUR
- **Digital Europe Programme** – AI, Cybersecurity, Interoperability, HPC,



# Thank you!

@eHealth\_EU

@DSMeu

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- eHealth: <https://ec.europa.eu/digital-single-market/en/policies/ehealth>
- R&D&I: <http://ec.europa.eu/horizon-europe>
- Digital Programme: [http://europa.eu/rapid/press-release\\_IP-18-4043\\_en.htm](http://europa.eu/rapid/press-release_IP-18-4043_en.htm)