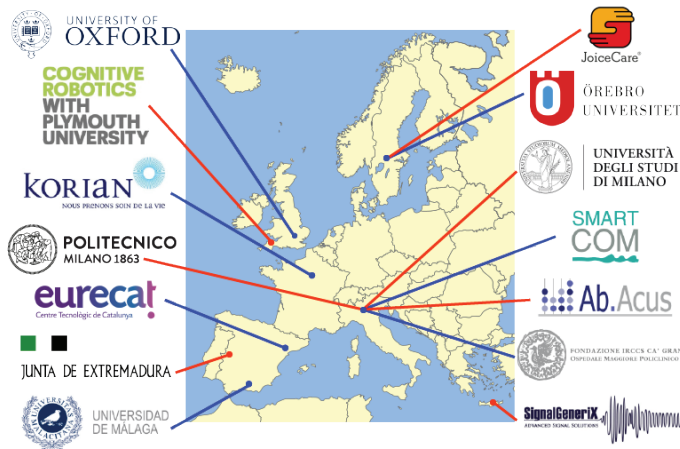


## MoveCare Impact

- ▷ Transform the third age into an active period of life **increasing inclusion inside the society.**
- ▷ Tighten the **bonds between elders and their social circle:** relatives and other peers.
- ▷ **Reinforce leadership and innovation capability** of the industry in the area of Ambient Assisted Living.
- ▷ Better allocate resources from National Service Providers, with **more effective and continuous care.**
- ▷ Nurture **elders empowerment** to support changes in personal behaviour and attitude to improve lifestyle and become better equipped to **face third age challenges.**
- ▷ Improve **key industrial sectors** like domotics, Internet of Things, Robotics, Exer-gaming and Virtual Communities.
- ▷ Contribute to develop **new care models** to monitor and assist the elder at home for prolonged time, seamless connected to public services.
- ▷ Explore **integration of robotics and gamification into an Ambient Assisted Living (AAL) setting.**
- ▷ Use the multi-actor system of MOVECARE to **develop and understand of new metrics** that characterise the operation of multiple-actor systems.

## MoveCare Consortium



# MoveCare

Multiple-actOrs Virtual Empathic CAREgiver for the Elder

*A new integrated platform to monitor and assist elders at home*

[www.movecare-project.eu](http://www.movecare-project.eu)

**Project co-ordinator:**  
 Prof. Nunzio Alberto Borghese  
 Applied Intelligent Systems Laboratory  
 Department of Computer Science  
 Università degli Studi di Milano  
 Milan, Italy

**Further information:**  
[www.movecare-project.eu](http://www.movecare-project.eu)



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## MoveCare Rationale

- European population is getting older due to the dynamics of fertility, life expectancy and migration rates.
- Elders with physical or cognitive problems are recovered in nursery homes too early.
- National Health Service Providers become saturated and they are forced to shorten the duration and the intensity of the services provided.
- ICT has the potential to change this providing an increasing number of functionalities and actors that can cooperate

## MoveCare Description

MOVECARE integrates an existing robotic platform with a domotic system, smart objects, a virtual community and an activity centre, to provide, through artificial intelligence, assistance, activities and transparent monitoring to the elder at home.

MOVECARE can be tailored to each elder thanks to a modular design. It is completely unobtrusive as MOVECARE does not require the elder to wear any particular device.

## MoveCare Main Objectives

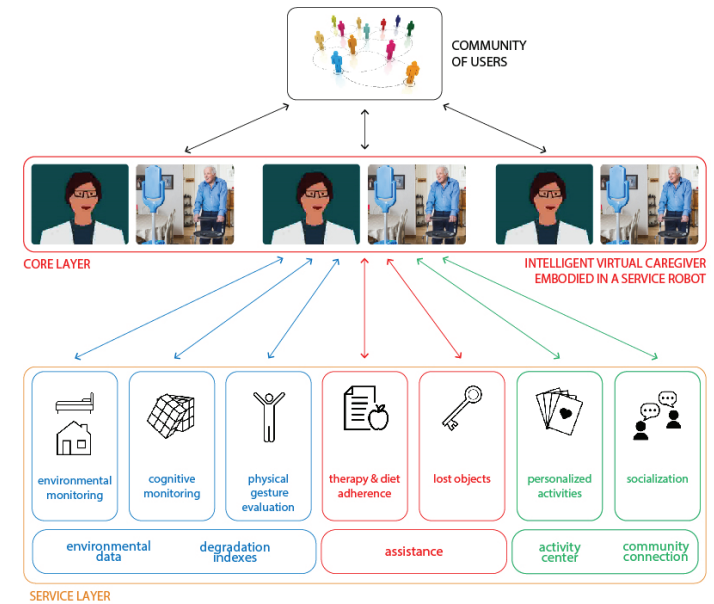
- Assist the pre-frail elder in a **confident independent living at home**.
- **Maximize elders motivation towards a healthy lifestyle** providing them personalized physical and cognitive activities.
- **Support socialization** through a **virtual community** that supports activities among peers to decrease elders' isolation.
- **Offer to caregivers indexes** on possible early physical or cognitive decline to enable them to enable an early intervention.
- **Develop adequate metrics** to evaluate heterogeneous multi-actor systems.

## MoveCare Hierarchical Platform

The **service layer** contains the monitoring systems and the activity centre. Cognitive and physical monitoring is carried out in a **complete transparent way**, while the elders are doing typical every-day activities using **smart objects**. The activity centre guides the elder through a personalized mix of physical and cognitive activities in connection with users of the virtual community thus **promoting socialization**.

The **core layer** contains the Virtual Caregiver. It receives heterogeneous information from the monitoring systems, the community of users and the activity centre. Through an Artificial Intelligence-based engine it **evaluates elder state, provides recommendations, suggests activities, assists the elder with lost objects**. It is embedded inside a **service robot**, endowed with **autonomous navigation capabilities** characterized by an **empathic interaction with the elder**. The core layer provides also assistance in **diet recommendations and therapy compliance**.

The **Virtual Community of users** acts as a bridge towards other elders, relatives and caregivers. It **proposes peers** most adequate for activities. It collects periodically multi-media documents on specific themes rooted in the past enabling **collective memory**.



## MoveCare Pilot

MOVECARE will be tested under real conditions in three different sites under the supervision of **Korian Italy, Policlinico di Milano** (Italy) and **Junta de Extremadura** (Spain). Not only the elder will be involved in the pilots but also the network of his/her carers.

Pilot will allow the comparison of the **effectiveness and suitability** of MOVECARE support with standard assistance and to analyse the most appropriate and realistic model to provide MOVECARE to elders, taking into account their needs, and the possibilities of service providers.

Pilot will be used also to test suitable **functional and structural metrics** to evaluate MOVECARE in terms of improvement in its abilities as described by H2020 Robotics Multi-Annual Roadmap.