ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

AMBIENT ASSISTED LIVING

Extending the time older adults can live in their life environments by increasing their autonomy and by promoting a healthier lifestyle.

New and existing technologies can be integrated into people's life environments, supporting everyday living and promoting healthier lifestyles and social inclusion. This can be particularly beneficial for the elderly and for people with disabilities, allowing them to continue to live independently in their own homes, in the community and at work.

At the University of Bologna, researchers have a strong expertise in the **design, development and real-life testing of smart and adaptive environments.** Multidisciplinary teams are used to work together with a participatory design approach.

Researchers have exploited the potential offered by **Internet of Things** (IoT) technology, wearable sensors, mobiles, biomedical signal processing and Artificial Intelligence for prototyping smart objects and environments capable of identifying, locating, and sensing.

These new environments can lead to new ways of communication with friends, family, caregivers and the objects themselves; can help to identify, monitor, and learn daily living activities in order to provide personalized advice (e.g. on sleep, diet, physical activity) and prevent functional decline or injuries, for an active and healthy aging; can be used to stimulate the user by making life mentally and physically more challenging but without losing comfort.

HIGHLIGHTS

Active & Healthy Ageing: the University of Bologna has a consolidated track record of projects aimed at improving health and safety in order to support active aging through digital tools, mobile technology and wearables (e.g. FP7 **FARSEEING**; H2020 **PreventIT**; IMI-2 **MOBILISE-D**; ROP-ERDF **HABITAT**). The FARSEEING project has been selected by the European Commission as one of the top 3 most influential and high-impact projects of the last 11 years in the field of ICT for Active and Healthy Ageing, and two of its results have been recognized as 'key innovations' by the EC Innovation Radar.

Home care systems: the University of Bologna has strong experience in domestic rehabilitation based on bio-feedback, exergames and virtual reality, regularly designing and clinically validating personal health systems that, like personal managers, aim at empowering older persons or patients and at preserving their health (e.g. EIT Digital **Vital@Home**).