

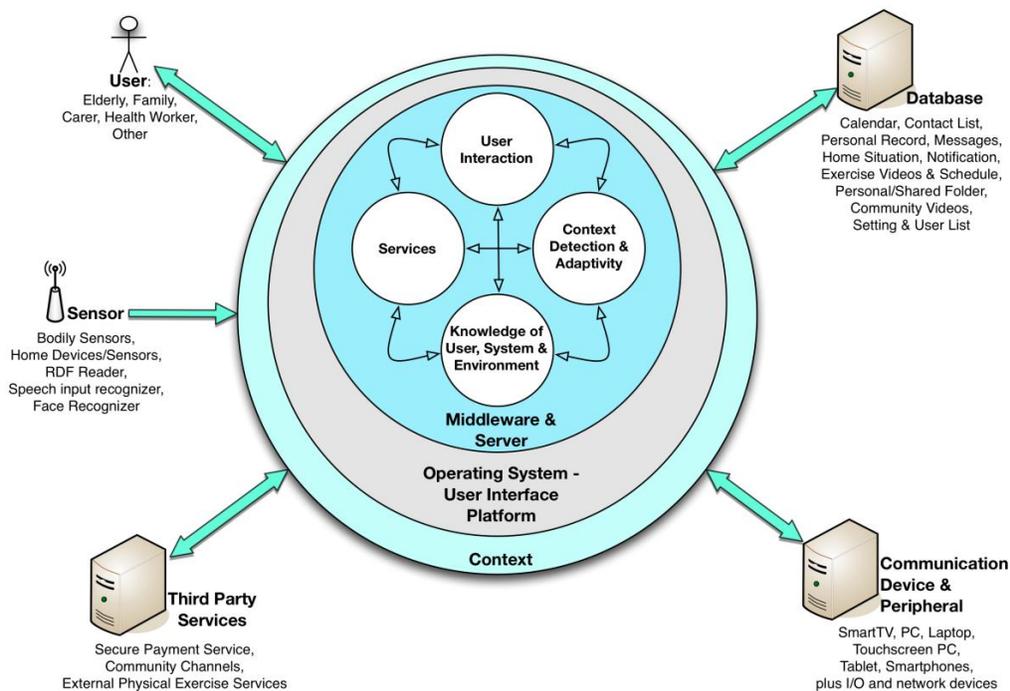
Care@Home: An integrated approach to care and social inclusion of elderly

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Faced with the challenges of ageing populations¹, AAL projects have resulted in promising ICT-based solutions ensuring wellbeing and independence of older people in their homes. However, we found that widespread introduction and acceptance of systems is still lacking due to (1) lack of accessibility (high costs and efforts in installing systems) (2) psychological and technological barriers for elderly and (3) lack of a holistic approach to system design including all stakeholders, services etc.

An *inclusive* and *integrated* approach is needed to AAL design for elderly that is cost-efficient and requires little adaptation. Inclusive refers to designs suitable to a large amount of users with different degrees/types of impairment and technological literacy. An integrated platform is one which is designed to integrate personal services for the elderly (reminders, emergency detection, care, games), and connect formal/informal care networks and community members.

The CARE@HOME project (www.careathome-project.eu/) exemplifies this approach aimed at refined quality of life, improved accessibility and social inclusion. CARE@HOME is about enabling empowerment, wellness and social care to the homes of the elderly through interactive multimedia.



The Care@Home Application

Fig 1: Overview

¹ United Nations Population Division (UNPD - 2011). World Population Prospects: The 2010 Revision. New York: UN Population Division.

The elderly will use a smartTV acting as a user-centred hub providing reciprocal communication for elderly, family, and caregivers and services for household, medical record, physical activity, community information and entertainment. Due to the familiar TV interface the elderly user is encouraged to use the provided services towards attaining a 'self-serve' society.

CARE@HOME is innovative in several respects. (1) It enables care services at home without the costs of retrofitting existing dwellings. (2) It provides an open platform (Fig 1) offering context-based services and adaptive user interaction that facilitates an independent lifestyle and the assurance of timely access to caregivers. (3) Technology (e.g. sensors and communication) is integrated in community-driven products, which are highly personalized and easy-to-use.

The accessible platform opens up a market for continuous development of new services by various companies to be offered to the elderly without the need to install new hardware or software.

The design concept of CARE@HOME is focused on human-centred design for understanding the user in context. By employing Value Sensitive Design and Participatory Design, we tackle usability, user experience, and ethical issues systematically through early user involvement and iterative integration of research and development. In our recent design of a service for group awareness and communication between elderly and formal/informal caregivers (ConnectedCare) we conducted a qualitative, interview-based Wizard-of-Oz study with older adults. HTML mock-ups were used to gather feedback on early design concepts and resulted in interesting findings regarding presentation choices and privacy concerns.

For evaluation of the complete platform 'living labs' will be used. We expect that acceptance of the new technologies will increase through working with stakeholders throughout the design process.