



















Content







Project KPIs & Project Concept



12 Digital & Human Advisor







Active Advice

Decision Support Solutions for Independent Living Using an Intelligent AAL Product and Service Cloud









he ActiveAdvice project aims to create an active advising and decision-support network across Europe, tackling the shortcomings of a web platform and providing a holistic overview of the AAL ecosystem. This is supported by a comprehensive ICTbased environment, presenting a broad state-of-the art collection of available AAL products, services and technologies offered at regional, national and international levels, which are stored in an Intelligent AAL Product and Service Cloud. With the help of digital advisors, the project supports informed decision-making and brings together the whole AAL stakeholder ecosystem. Throughout the project, extensive end-user studies are carried out, building the basis for the conception and implementation of service models

for three target groups: older adults and their relatives (AAL2C), businesses (AAL2B), and governments (AAL2G). Iterative user feedback and usability testing as well as human advisor certification across all consortium countries ensure the quality of the ActiveAdvice environment while increasing the uptake of AAL. In establishing ActiveAdvice as a decision-support tool, the project will also support a pan-European network of Authorized Active Advisors.

Project Objectives

The ActiveAdvice project aims to deliver a fully functional ICT environment with specific web services for older adults and their relatives to support their independend living, for businesses and service providers across Europe, as well as for governments and municipalities involved in Active and Assisted Living (AAL). The ICT environment offers a holistic market overview, presenting regional, national and international AAL products and services in accordance with the needs of the end users, and combines it with an integrated focus on the target market.

Expected Results and Impact

ActiveAdvice creates a novel ICT environment composed of digital and human advisors, enhancing information exchange and expert dialogue, as well as the technology and service uptake in the field of AAL. Through the creation of service models tailored to the specific needs of the three target groups AAL2C, AAL2B and AAL2G, combined with the creation of an international network of Authorized Active Advisors empowered by the



ActiveAdvice solution, an increased rate of awareness for AAL and the implementation of AAL solutions is reached across Europe.



An Innovative Decision Support Approach

ActiveAdvice creates an ICT environment with digital advisors to support decision-making, enhancing information exchange and expert dialogue, as well as technology and service uptake in the field of AAL. Through the creation of service models tailored to the specific needs of the three target groups consumers (AAL2C), businesses (AAL2B) and governments (AAL2G), increased awareness for AAL solutions is reached across Europe. Based on the knowledge provided by ActiveAdvice, the AAL target audience is supported in an informed decision-making process on how to prolong and enhance their independent life through employment of the right ICT solutions for their needs and requirements.

Involving the AAL Stakeholder Ecosystem

Who are the main target groups of AAL products, solutions and technologies, and how can they be addressed? In order to answer these questions, the ActiveAdvice consortium analysed current research in the field of AAL to identify target groups and the best ways to address them. Even though in the literature older adults have been clearly identified as the main stakeholders of AAL technologies, there is a whole ecosystem of stakeholders that needs to be taken into consideration. Therefore, ActiveAdvice not only takes account of consumers, i.e. older adults and their relatives (AAL2C), but also of businesses in the fields of care and technology (AAL2B) and governments and public bodies (AAL2G). The integration of the whole AAL stakeholder ecosystem leads to new conceptual and technological developments, and opens up the design process to various stakeholders, making it a collaborative effort.

Review of Existing Platforms in the Field of AAL and Care

In order to be able to develop the ActiveAdvice decision and support platform, the ActiveAdvice consortium carried out research for existing platforms providing information about AAL and Health. In the context of AAL, "platform" refers to many different types of solutions with different purposes. Two types are most prominent: First, there are platforms aiming at the integration of tools and services into an independent living environment. Secondly, E-Health platforms provide knowledge and dialogue options, enhanced with current information on health issues. Nevertheless, both types are failing to provide sufficient comprehensive knowledge and solution overview on a European level. ActiveAdvice



is aiming to fill exactly this gap: The platform will furnish different stakeholders with much needed information, giving a comprehensive overview of AAL technologies, services and products. Furthermore, although it is recognized that older adults have a minor inclination to embrace new technologies than younger people, it is not true that age alone predicts technology acceptance and use. In fact, the "technophobic" image frequently used to depict older adults has been shown to be skewed. Research has been demonstrating that if older adults recognize the technological solutions as beneficial, they will be motivated to use it. Addressing precisely this lack of knowledge, ActiveAdvice will provide knowledge about technical solutions and their benefits.

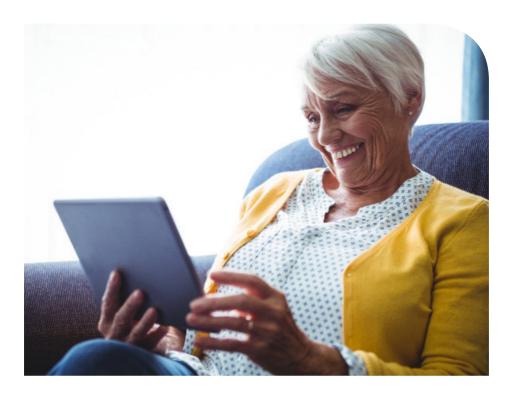
Studying AAL User Information Needs

In order to ensure that ActiveAdvice addresses the needs of AAL costumers, businesses and governments, an in-depth study on their respective information needs and channels for knowledge communication was conducted. The ActiveAdvice consortium analysed current research to identify essential ways to address all target audiences of the project and the advisory solutions developed. Besides older adults using AAL tools for home support, their formal and informal caregivers need to be considered in this information transfer context. For family members of older adults, often acting as informal caregivers, time saving through monitoring and support in general are essential.

Finding out the future user's needs is one of the most elementary aspects in creating and designing the ActiveAdvice platform. Therefore, semi-structured interviews with the three identified stakeholder groups were carried out in the six different consortium members' countries. The results of these interviews show that the implementation of a European advisory platform will have positive effects on all three stakeholder groups. The possibility to be informed easily and in-time is greatly welcomed. Moreover, even though care is experienced as a clearly regional if not local reality, considering AAL technologies, products and solutions from a European-wide perspective has distinct advantages such as allowing businesses to learn about developments in other countries and thus profit from synergies.

Social Features and Information Retrieval

A key factor to the success of a platform is the option to interact: The more interactive a platform is, the more likely it is, that users become content providers. In order to engage people into contributing and also to provide digital advisor support, features like blogs, reviews and messaging are essential. An option to enhance the information retrieval in ActiveAdvice through user feedback is the inclusion of social media features dedicated to community exchange. This can support a user in decision making and resource selection processes.



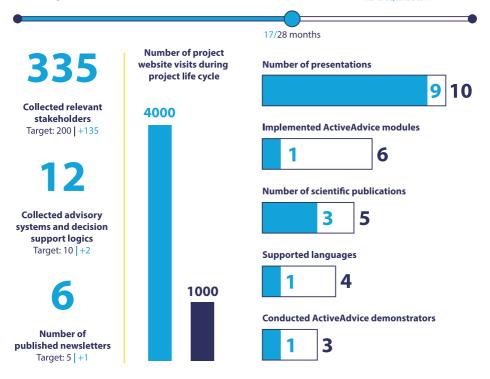
Trust in Digital Advisory Services

Trust is a key area of concern in ActiveAdvice. Consumers need to trust the web services, the communication within the community and finally the products themselves. Knowing how to build-up trust and identifying the drivers of online trust are key responsibilities. Even more complicated and challenging is trust in e-commerce compared to real life shopping experiences. Important factors for trust are peer endorsement and use interfaces. Branding, online expertise and familiarity with the structure are of lower relevance. In summary, the website design quality is a crucial trust-building criterion and one that most influences people revisit. Especially in providing decision-support, ActiveAdvice needs to be trusted. Therefore, these findings are considered in the development of the platform

Facts and Figures Project KPIs

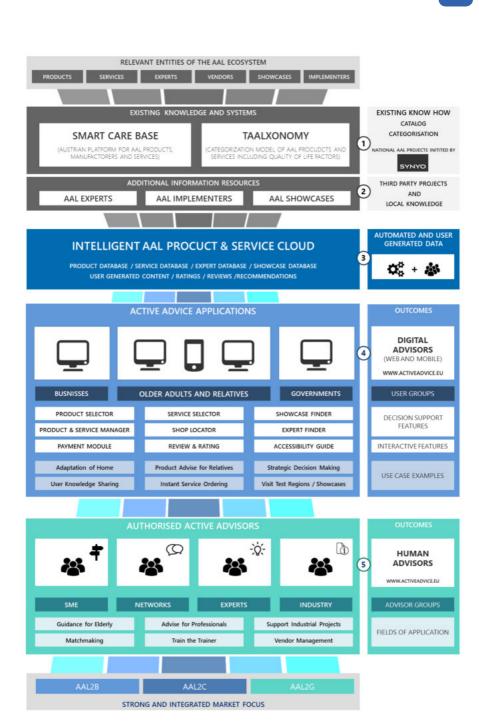
Target Status

The cut-off date for the data included was 4th September 2017



Future targets





Digital & Human Advisors



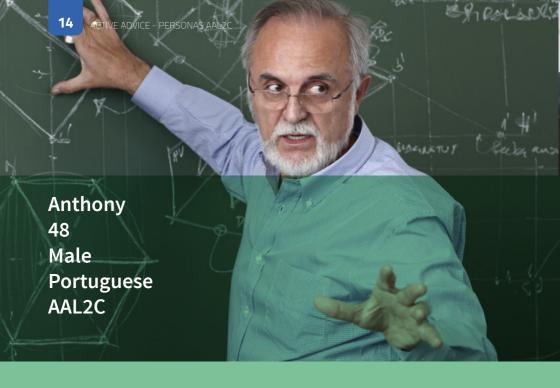


Digital Advisors for Informed Decision-making Aimed at the three target groups of ActiveAdvice (AAL2C, AAL2B, AAL2G), the digital advisors provide information that enables informed decision-making and empowers Authorised Active Advisors to give targeted and individualised advice. In order to address the different needs for information, the digital advisors are divided into three groups, each with a different focus. These three advisor systems work in parallel: The Catalogue Advisors provides information about AAL and Smart Health Catalogues and guides the three target groups to the right catalogue for their respective needs. The Category Advisor informs consumers, businesses and governments about use cases and scenarios, based on the TAALXONOMY classification system developed by SYNYO, guiding them to the right product category for their individual situation. Lastly, the Product & Service Advisor informs all target groups about AAL products and services, based on product attributes and specific for each product category presented in the Category Advisor

Human Advisors as Key to Success

The selection of technical solutions to be installed in homes, public spaces and work places is still subject to human factors. In order to reduce major obstacles erasing from trust issues against new technologies and from feeling ashamed of the personal health situation, a network of human advisors is identified as crucial success factor for ActiveAdvice. The human advisor ("Active Advisor") is therefore a core concept of the ActiveAdvice project and adds a human component to the digital advisory system, complementing certain distinct values to the otherwise non-human decision support. Using the ActiveAdvice digital advisors for their work, users can become Authorized Active Advisors to support the selection of suitable AAL solution. The possibility for everyone to engage in the ActiveAdvice community enables exchange of experience and knowledge. This leads to reduction of fears and reservations in the primary end users of AAL, enabling a faster uptake of products and services.





Anthony is a 48-year-old professor at the university of Lisbon. He is married and his children have already moved out to live abroad. He lives in the suburbs and wants to move closer to the city center because it would be closer to services and work. He also hates gardening. Anthony is very tech aware and uses his smartphone often, e.g. to tweet from conferences.

Anthony is thinking ahead and plans long term. He realises decisions he takes now will affect his future life when he will be old. He looks for smart solutions and wants the best even if he cannot afford. His wife is much less in the same mood and restrains him. She agrees to the move as she expects to have a much busier social life in the city.

Anthony likes:

Fancy technology (smart home) Alcohol (red wine) and smoking cigars. His job and the travels. Social weekends with other couples.

Anthony fears:

Stay isolated from his social network Critical medical incident (after he had a mild heart attack) Hospitals Genetic predisposition for Parkinson's.



Health

Anthony suffers from light overweight.

He realises that although he never practised sports since he was a student, he will need to move more.

Use of ICT Readiness to act as informal caregiver Capacity to act as case coordinator * Mobility Social network of his parents:

^{*}The capacity to coordinate most or all of the health and practical aspects of a patient's needs; whether the person is him-herself the patient, or as informal caregiver of another patient.



XT&C is a small start-up company found by 2 enthusiastic software developers with a heart for enriching the lives of older adults. To realize their vision they developed the app 'EropUit!' that provides older adults with an easy way to find like-minded people, prevent loneliness by going out, meet others and stay active. The business model for XT&C is based on advertisements in the free version of the

app and membership fees from users of the premium version. The app asks users to provide preferences in order to match people. EropUit! is used most in the region where the company is established. This partly due to the presence of an active community as result of training/ test events where XT&C invites local older adults to participate. These that stayed engaged with the app and hence form a stable active user community.

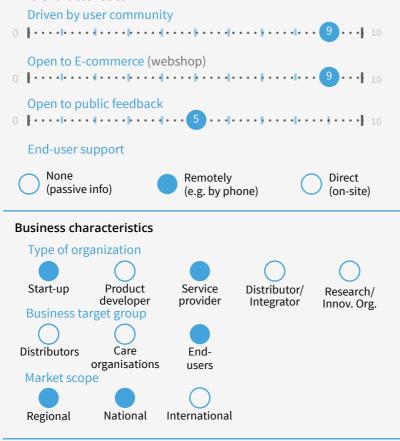
Management:

The 2 original founders (old friends) of XT&C are managing directors, of which one primarily acts as operational manager, and the other as sales executive. To make sure the workflow stays efficient when working to improve the app with the whole team, which includes the head of design and an backside engineer, an agile approach is used.

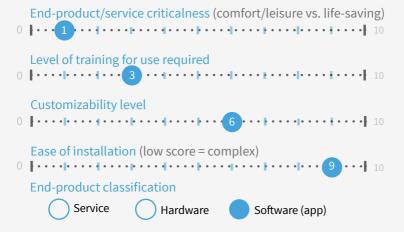
Communication/Marketing:

Currently XT&C relies heavily on online media, links on the website of media partners that redirect visitors to their own homepage and Facebook page (Twitter is considered useless). On their homepage they make use of testimonials of real users to promote and increase trust in the app.

B2C Characteristics



General end-product/service characteristics





Anna is a 43 year old care consultant working at a municipality in the Netherlands. Anna holds conversations with citizens who ask for any form of assistance and together she has to indicate what kind of assistance will be provided. Most clients wish to stay at home and not many places are available at existing elderly homes. Anne is very concerned about the fate of older adults and always tries to find a solution which can help them, even when people are not eligible for compensation. She focuses on

services that are locally available. Anna works for a small municipality in the south of the Netherlands. It consists out of 20.000 people, mostly living in villages and rural area. There is relatively large share of elderly in the municipality (65 and older). The local government wants their citizens to live at home as long as possible. On top of that, the local budget is declining because of cutbacks at national level. So there is a challenge to provide sufficient care while demand is growing and the budget is declining.



Case:

Anna has contact with an older couple of 77 and 82 years. The woman is aged 82 but she has to take care for a husband who suffers from beginning dementia. Because of this he needs more and more assistance with daily tasks. The woman is still in relatively good condition and they already receive assistance in the household. They request more help, but given the good condition of the woman

and the fact that the dementia is at a starting stage, extra help is not awarded by the local government. Anne would like to help them and is searching for solutions that could assist them in their daily life, despite the fact that the couple is living on a small budget. On top of that, the only child they have lives in Amsterdam, which is about 150 km away.

Criteria:

| Use of ICT | 10 |
|--|----|
| Readiness to contribute to AA | |
| 1 1 | 10 |
| Local (1)- National (10) | |
| 1 · · · · · · · · · · · · · · · · · · · | 10 |
| Oportunistic (1) vs neutral (10) | |
| <u> </u> | 10 |

About the Consortium



SYNYO GmbH

A SME based in Vienna, Austria, is an independent

research, innovation and technology hub that explores, develops and implements novel technologies to tackle business and societal challenges. SYNYO analyses the impact of emerging technologies on business and consumers, and provides clients with novel insights on innovations affecting their investments and businesses. In ActiveAdvice as a research company SYNYO will lead WP1, and will be responsible for the overall project coordination. In WP3 (Concept) SYNYO will be involved in the elaboration of the concept for ActiveAdvice focusing on the specification of technical framework and requirements, AAL-driven and -triggered

components and features including mockups. SYNYO will lead WP4 (Development) and will setup a modular and responsive web architecture, develop an intelligent AAL product & service cloud, and will program the ActiveAdvice service modules. In WP5 (Testing) SYNYO will deploy a functional and responsive webbased demonstrator including end user customization. In WP6 (dissemination) SYNYO will be mainly responsible for the launch of the project website. SYNYO will work in close collaboration with all project partners, especially the Essl Foundation in WP2 and WP5 when it comes to research on the national AAL landscape. in Austria and the involvement of experts and users through national stakeholder involvement workshops.



Zurich University of Applied Sciences

The Zurich University of Applied Sciences comprises eight Schools, covering

architecture and civil engineering, natural sciences and technology, language and communication, psychology, health and social work and business and management. In ActiveAdvice as a research organization ZHAW is leading WP2 and focuses on defining the research and data collection methodology for the comprehensive structured collection of AAL stakeholders in the project partner countries and the deduction of group-specific requirements, as well as on research on existing studies, analyses, concepts and

best practices on AAL advice, decision support and authorization. ZHAW is also involved in WP5 (Testing) and WP6 (dissemination) focusing on dissemination of the project results in a scientific community. ZHAW will work in close collaboration with other research partners and end-users, as well as developers as their results will be input for the following technical tasks in WP3 and WP4. As all partners this partner will be involved in research on the national AAL landscape, the authorization process and creation of country-specific side material to inform about AAL; and the involvement of experts and users through national stakeholder involvement, consultancy, training and networking workshops.

Smart Homes

Stichting Smart Homes

SmartHomes (SMH) is the Dutch expert center on home automation, smart living and eHealth. It is an independent non-profit organization, with close relations with many end-user organizations in the Netherlands. On one hand Smart Homes is a recognized research center, on the other hand it is an expert center that performs many dissemination and consultancy activities. The organization acts as an independent and intermediary organization in the complex market of technology and ageing, bridging the worlds of technology development and those of end-users and service/care pro-

viders. In ActiveAdvice as a research and development organization SMH is leading WP3 (Concept design) and focuses on the elaboration of the ActiveAdvice environment concept including web applications and human advisor authorization. As all partners this partner will be involved in research on the national AAL landscape, the authorization process and creation of country-specific side material to inform about AAL; and the involvement of experts and users through national stakeholder involvement, consultancy, training and networking workshops in close collaboration with ALK as the second Dutch partner.

Cybermoor Services

Cybermoor Services

Cybermoor (CYB) is a social enterprise located in Alston, in the North Pennines (United Kingdom). The remoteness of the community lead to the establishment of Cybermoor in 2002, providing broadband and PCs to improve access to services and overcome isolation. In 2007, Cybermoor established the Alston Healthcare project http://www.alstonhealthcare.co.uk/, which focused on developing telehealth and telemedicine services for the local community. CYB has a network of 360 people connected to broadband;

links with NGOs across Cumbria such as Age UK and links with the local health-care community (both clinicians and managers). In ActiveAdvice as an SME CYB is conducting data consistency and performance tests. As all partners this partner will be involved in research on the national AAL landscape, the authorization process and creation of country-specific side material to inform about AAL; and the involvement of experts and users through national stakeholder involvement, consultancy, training and networking workshops.



City of Alkmaar The City of Alkmaar (ALK) is a middle-large

city in the north-

ern-western part of the Netherlands, with approximately 100.000 citizens. It is very

active in supporting its ageing population (appr. 17.000 inhabitants are 65+) in maintaining independence and self-management. In ActiveAdvice Alkmaar will act as tertiary end-user organization. ALK will lead WP5, the testing and validation of

the ActiveAdvice result and will especially focus on usability and user experience tests, feedback loops and surveys with selected end users as well as the simulation and validation of ICT-based and AAL-driven ActiveAdvice services in realistic scenarios with end users. For this, the so-called Smartest House of Alkmaar will be used. As all partners, this partner will be involved in research on the national

AAL landscape, the authorization process and creation of country-specific side material to inform about AAL; and the involvement of experts and users through national stakeholder involvement, consultancy, training and networking workshops in close collaboration with SMH as the second Dutch partner.

YELLOW WINDOW Yellow Window NV Yellow Window (YW) is an SME based in Antwerp, Belgium. Yellow Window has three core activities: product design, service design and policy design. Within the multidisciplinary team, there is high representation of designers (industrial, service). User-centered approaches are privileged, mobilizing methodologies that combine observation, analysis and creativity, for enhancing products and services. Ageing is one of the domains

where the company is active, covering ICT-based products and services as well as other products, services and policies. Clients in this domain are from the public and private sector. Both service companies and manufacturing companies call upon Yellow Window's expertise to develop user-centered products and services. Yellow Window has experience in participating in European research projects, both within the framework of EC programmes as on AAL.

CINTESIS University of Porto ICBAS, CINTESIS

The Center for Health Technology and Services Research (CINT) is a non-profit research and development unit. It is currently hosted by the Faculty of Medicine of the University of Porto (FMUP), located in the recently inaugurated Medical Research Center (CIM) in Porto (Portugal). In ActiveAdvice as a research organization CINT will be involved in the collection of existing AAL solutions, services, product catalogues and solution providers relevant for ActiveAdvice applications. As a teaching and training organization CINT

will be strongly involved in the definition of the design of human advisor workflow procedures and authorization process in WP3 as well as in WP4 when it comes to the elaboration of relevant platform content and comprehensive materials for digital and human advisors. Furthermore CINT will lead WP6, where it will be supported by the other project partners. As a research partner CINT will also contribute to publications for the research community and practitioners and attend conferences. As all partners this partner will be involved in research on the national AAL landscape, the authorization

process and creation of country-specific side material to inform about AAL; and the involvement of experts and users through national stakeholder involvement, consultancy, training and networking workshops.

Project Facts

COORDINATOR SYNYO GmbH

DURATION 28 months

STARTING DATE 01 April 2016

PROGRAMME AAL Programme

NUMBER 2015-2-058

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ActiveAdvice is a project co-financed by the European Commission, AAL Joint Programme and the related National Agencies in Austria, Belgium, the Netherlands, Portugal Switzerland and the United Kingdom

