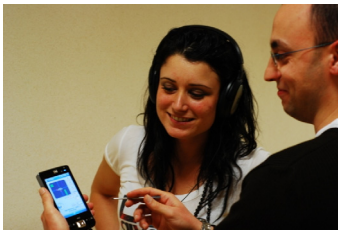


R+D+I Area Projects

The R+D+I Area at Avante is presenting prototypes and projects, mainly European, that focus on the research and development of new solutions for improving elderly people's independence and quality of life through the use of new technologies.

SENSACTION-AAL. Greater mobility in the home

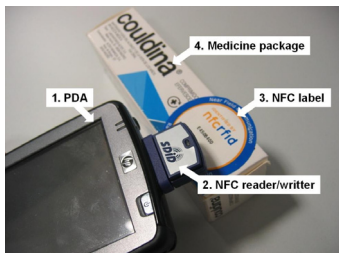


A portable device that improves the mobility of elderly people in their homes, increasing their balance and reducing falls. It is attached to the body and works by a system of sensors, a microcomputer and a button. It includes a training programme to suit the needs of each individual user, and a PDA for consultations by patients and carers.

Presentation: University of Bologna (Italy)

Consortium: University of Bologna (Italy), McRoberts Bv (Netherlands); Robert Bosch Gesellschaft fur Medizinische Forschung (Germany), University of Groningen (Netherlands), STMicroelectronics srl (Italy), Slovak Academy of Sciences (Slovakia), Tel-Aviv Sourasky Medical Centre (Israel) and Atos Origin Sociedad Anónima Española (Spain).

HMFM. Hear Me Feel Me



Tactile and audio services aimed at elderly people with severe visual impairments. It works by labels, based on Near Field Communication technology (NFC), which are activated by a scanner, such as a mobile phone. This might include packets of medication with built-in information on dosages or instructions for use which are issued through the mobile phone's audio device.

Presentation: VTT (Finland)

Consortium: VTT (Finland), Robotiker Foundation (Spain), Organización Nacional de Ciegos Españoles (Spain), Nokia Corporation (Finland), Top Tunniste Oy (Finland), Caritas Foundation (Finland), Finnish Federation of the Visually Impaired (Finland), Oulun 6.Joutsen Apteekki, (Finland) and the National Center for Scientific Research "Demokritos" (Greece).

DREAMING. Safety inside and outside the home



A home help system that improves health and safety both inside and outside the home, respecting the user's privacy and reducing trips to medical centres. It is equipped with wireless monitoring equipment for checking blood pressure and vital signs; an application that turns the television into an easy-to-operate videoconferencing screen; and a portable unit for trips outside the home.

Presentation: TB Solutions Advance Technologies and Servicio Aragonés de Salud-Barbastro.

Consortium: TB Solutions Advance Technologies and Servicio Aragonés de Salud-Barbastro, Tesan-televita srl (Italy), AGE-The European Older People's Platform (Belgium), Azienda per I Servizi Sanitari n°1 (Italy), County Council of Uppsala (Sweden), East Tallinn Central Hospital (Estonia), Health Information Management SA (Belgium), Heby Kommun (Sweden), Langeland Kommune (Sweden), Langeland Kommune (Germany), Pflegewerk Managementgesellschaft (Germany), Region Syddanmark (Germany) and Telemedicina Rizzola spa (Italy).

SENSORBAND I and II. Fall detector



A device fitted to the wearer's waist. It automatically detects falls so that first aid teams can respond and act more rapidly, reducing the risk of death. It also alleviates elderly people's fear of falling and improves their autonomy, safety and quality of life. The prototype is currently being tested in Sweden and Finland.

Presentation: University Oulu (Finland), Luleå University of Technology (Sweden) and Caretech AB (Sweden)

Consortium: University Oulu (Finland), Luleå University of Technology (Sweden), Caretech AB (Sweden), Kalix Electropolis AB (Sweden), National Semiconductor Finland Oy, Elektrobot Wireless Communications (Finland), Oulu Deaconesses' Institution (Finland), Kalix municipality (Sweden).

HAPPY AGEING. For a healthier and more comfortable life



A system of sensors installed at different points around the house to check whether the user is doing certain daily tasks: eating, drinking, taking the right medication, etc. In unusual situations (e.g. if the fridge hasn't been opened all day, or the person has not got out of bed), it automatically alerts the carers. It also has a system for locating elderly people anywhere in the home and showing them the way home if they get disorientated while out. It includes a service for making calls, turning the television on and off, and even searching for glasses.

Presentation: Ab.bacus srl (Italy)

Consortium: Ab.bacus srl (Italy), Istituto Nazionale di Riposo e Cura per Anziani V.E. II (Italy), Fundació Privada Cetemmsa (Spain), Speed Automazione Srl (Italy), Global Security

Intelligence Limited (UK), Institute of Sociology, Hungarian Academy of Sciences (Hungary), The Association of Catholic Organisations of Senior Citizens in the Netherlands (Netherlands).

T-ASISTO. Telecare through DTT



New telecare services through Digital Terrestrial Television (TDT). With a single remote control, and using the television as an interface, elderly people can control all the multimedia equipment in their home (radio, television, video, etc) and also get access to different telecare services: medical monitoring, videoconferences with medical specialists, and tele-education for stimulating mental agility, amongst others.

Presentation: NET 2 You, S.L. (Spain)

Consortium: NET 2 You, S.L. (Spain), Instituto Tecnológico de Aragón (Spain), SABIA Bioingeniería Aragonesa (Spain), Investronica S.A. (Spain) and Mapfre Quavita (Spain).

eCAALYX. Global telecare

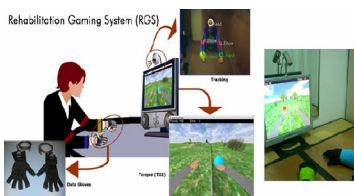


An integral telecare system for elderly people with chronic diseases. It allows healthcare professionals, social workers, family members and carers to check the patient's health from a distance (such as their vital signs) and monitor their living conditions, promoting healthy habits. It increases freedom and safety, improves quality of life, and reduces the cost of healthcare and social support services. It also works outside the home, by using items of clothing with built-in sensors to monitor the wearer's vital signs.

Presentation: CETEMMSA Technological Centre (Spain)

Consortium: CETEMMSA Technological Centre (Spain), Telefónica Investigación y Desarrollo (Spain), Instituto de Engenharia de Sistemas e Computadores do Porto (Portugal), University of Plymouth Enterprise Ltd (UK), University of Limerick (Ireland), Fundació Hospital Comarcal Sant Antoni Abat (Spain), Fraunhofer Portugal (Portugal), CorScience GmbH & Co KG (Denmark) and Ev. Krankenhaus Witten GmbH (Denmark).

RGS- Rehabilitation through virtual reality

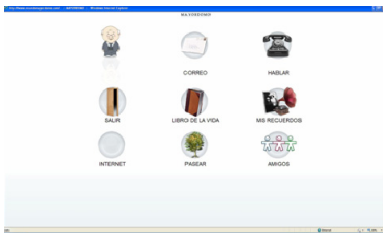


A high-tech tool for performing rehabilitation exercises by people with reduced mobility in the upper limbs due to brain injuries. It combines the movement with the associated action displayed in a virtual reality image. The workout tackles the functional reorganization of the motor areas affected in the brain and stimulates other secondary areas to make the same movements. Preliminary studies with patients have shown positive results.

Presentation: Pompeu Fabra University (Spain)

Consortium: Pompeu Fabra University (Spain), TicSalut Foundation (Spain), Guger Technologies OEG (Austria), University Hospital Düsseldorf, Heinrich-Heine-Universität Düsseldorf (Germany), Hospital del Mar i de la Esperança (Spain), Hospital Vall d'Hebron (Spain) and Tyromotion GmbH (Austria).

MAYORDOMO. Mood detector

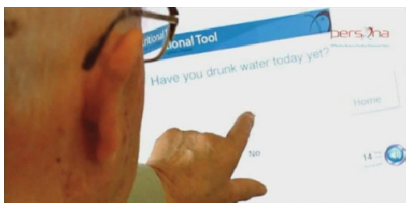


An e-care tool for diagnosing, treating and improving the emotional state of elderly people. Thanks to facilities such as chatrooms, they can communicate and interact with other people and share positive experiences and memories. For families, carers and healthcare personnel, this service helps them to identify at an early stage whether the user is suffering from depression or anxiety, or if they feel excluded, and thus monitor their progress.

Presentation: Instituto I3BH - LabHuman (Spain)

Consortium: Instituto I3BH - LabHuman (Spain), Labpsitech (Spain)

PERSONA. Integral technological solutions



A new platform that brings together all the solutions of Ambient Assisted Living available in the home. It incorporates new services for monitoring the health and mobility of elderly people during their everyday activities thanks to advanced technologies such as biosensors and intelligent materials. The aim is to turn it into an integral, easy-to-use, affordable and sustainable system for users, carers and administrations. Currently at the research stage.

Presentation: Heath and Wellbeing Technologies- TSB (Spain)

Consortium: Heath and Wellbeing Technologies- TSB (Spain), The Norwegian Centre for Telemedicine (Norway), Region of Southern Denmark (Denmark), Odense Municipal Government (Odense Kommune) (Denmark), FutureCamp GmbH (Germany), Fraunhofer Institute for Computer Graphics (Germany), Polytechnic University of Madrid (Spain), Institute of Textile Technology-AITEX (Spain), Spanish National Research Council-CSIC (Spain), Vodafone Spain Foundation (Spain), Díaz-Bastien & Truan Lawyers (DBT), The Valencian Office for the Information Society (OVSI), Vodafone Omnitel N.V (Italy), R&S INFO srl (Italy), RATIO CONSULTA SpA (Italy), Interdepartmental Research Centre "E. Piaggio", Faculty of Engineering, University of Pisa, Mountain Community of Taro and Ceno Valleys (CMV), CNR Institute of Information Science and Technologies (CNR-ISTI), ANCO S.A. Agencies, Commerce & Industry (Greece), SPIRIT (Greece)

COMPANIONABLE. Safety and quality of life in the home



Mobile robot for domestic use which allows remote control of the user's health and deals with everyday activities such as reminders to take medication, amongst other functions.

Presentation: Tecnalia (Spain)

Consortium: Tecnalía (Spain), University of Reading (UK), Technische Universitaet Ilmenau, Assistance Publique Hôpitaux de Paris (France), Groupe des Ecoles des Telecommunications (France), AIT Austrian Institute of Technologie GMBH (Germany), Legrand France S.A. (France), AKG Acoustics GmbH (Germany), Chambre de Commerce et d'Industrie de Paris (France), AG ESIGETEL (France), Université d'Evry-Val d'Essonne, Metralabs GmbH Neue Technologien und System (Germany), Stichting Smart Homes (Netherlands), Center for Usability Research and Engineering (AT), University of A Coruña (Spain), Innovation Centre in Housing for adapted Movement (BE), Fundation Instituto Geronotológico Matia-Ingema (Spain), and Verklizan B.V. (Netherlands)

SOPRANO. Intelligent home systems



An advanced telecare service for the intelligent home that helps users to interact with their multimedia equipment and other electronic appliances, detect anomalous health situations, movements, etc., and send reminders and alerts about taking medication, for example.

Presentation: Tecnalía (Spain)

Consortium: Tecnalía (Spain), Exodus S.A. (GR), Tunstall Telecom Ltd (UK), SingularLogic Software Anonymos Etairia Mechanografikon Efarmogon (GR), CAS Software AG (Germany), empirica Gesellschaft für Kommunikations- und Technologieforschung mbH (Germany), PROSYST Software GmbH (Germany), Dialog ID Technology BV (Netherlands), Smart Homes - Dutch Expertise Centre for Smart Technology and Smart Living (Netherlands), Institute of Communication and Computer Systems (GR), Netherlands Organisation for Applied Scientific Research – TNO (NL), Institute for Language and Speech Processing (GR), University Stuttgart, Institute for Human Factors and Technology Management (Germany), Forschungszentrum Informatik an der Universität Karlsruhe (Germany), Centro de Tecnologías de Interacción Visual y Comunicaciones VICOMTECH (Spain), Zentrum für Graphische Datenverarbeitung e.V. (Germany), University of Ljubljana, Faculty of Social Sciences (Slovenia), University of Liverpool (UK), Stichting Verzorging & Verpleging Eindhoven – De Archipel (Netherlands), FASS - Andalusian Social Services Foundation (Spain), Work Research Centre Ltd.(Ireland), and West Lothian Council (UK).

BLUE TYPE. Wireless Braille keyboard



A wireless Braille keyboard that can be connected to various appliances by Bluetooth, infrared or USB port. It is small, easy to handle and low consumption (developed by ONCE).

Presentation: Tecnalía (Spain)

TELPES. Telecare for the Deaf

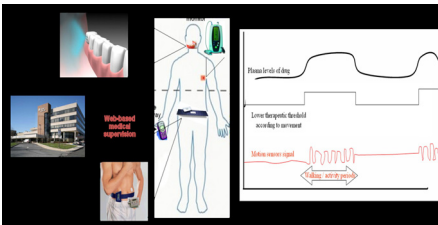


Telecare solutions adapted to the deaf or hearing impaired. It is based on the integration of technologies such as allowing videoatención-visual communication in Spanish and sign language also allows to show text and icons through television and telecare user-associated common home alarm systems and / or warning lights and vibration.

Company: Fundación Vodafone España

Consortium: Fundación Vodafone España, Fundación CNSE, CNSE, Cruz Roja Española, Escuela Universitaria de Ingeniería Técnica de Telecomunicaciones de la Universidad Politécnica de Madrid, Fundación TECSOS.

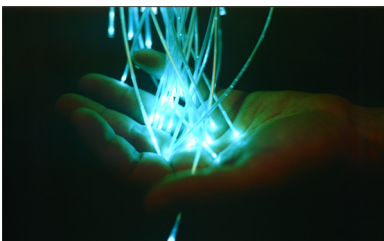
HELP. Control of medication in Parkinson's patients



Infusion pump with sensors that graduating the dose of medication as the motor function of Parkinson's patient. It also includes a dental device for continuously administering the drug to be absorbed through the oral mucosa.

Consortium: Fundació Hospital Comarcal Sant Antoni Abat, Telefónica Investigación y Desarrollo SA Unipersonal, Saliwell Ltd (Israel), Nevet Ltd (Israel), University and Hospital of Palermo (Italia), Telecom Italia Spa (Italia), HSG-IMIT, Hahn-Shichkard-Gesellschaft für angewandte Forschung eV for its Institut für Mikro-und Informationstechnik (Alemania), Mobile solutions group GmbH, Universitat Politècnica de Catalunya.

SENTITS. Classrooms of sensory stimulation



Program implementation of multisensory stimulation classrooms social living environments (day care centers, day hospitals, etc.) For older people with loss of autonomy.

Consortium: Fundació Hospital Comarcal Sant Antoni Abat, Handycat IDP, SL

ACADIM. More accessible cash machines

Aimed at seniors and people with disabilities. Using mobile devices with integrated security, the user can withdraw money from ATMs.

Project Leader: Fundación ONCE
Company: Fundosa Tecnosite, SL

AVANZA TD. Accessible and interactive TV

Decoder device that works with server and internet. It allows people with disabilities access to digital TV, its contents and technical support services or products support (screen magnification, sign language, speech synthesis menus, subtitles, etc..).

Project Leader: Fundación ONCE
Consortium: Fundosa Tecnosite, SL, Telefónica I+D+i

ERIGO. Inductor movement



Robotic rehabilitation tilt-table for people with neurological damage. Allows you to place the patient in the upright position tolerated and combines the simultaneous movement of the legs with a cardiovascular effect.

Company: Samarit Mediberica, SL
Manufacturer: Hocoma A.G.

OPTISCAN. Fall Prevention



User-friendly device for preventing falls in the elderly living in nursing homes or with cognitive impairment (patients with Alzheimer's disease, senile dementia, etc). It works via sensors installed in the room that notify caregivers if the patient has begun to get out of bed, thus avoiding the use of physical restraints to the rails.

Company: Serenocare, SL

VIDAM. Social network of caregivers



Social network for caregivers of dependent people (men and women of 55 years on average). The platform joins this group in the same environment, which can communicate via videoconference and share experiences. The aim is to improve mood and wellbeing of carers.

Company: Keepu Media
Consortium: Keepu Media, Fundació I2cat, FPAPD