AAL-Active and Assisted living programme

List of funded projects as best practices- Independent living in an ageing society through innovative ICT solutions

Each project has developed or harnessed new technologies or ICT solutions that address the pressing challenges of caring for and assisting European citizens in or approaching their 'golden years.'

SILVER project (Ireland)

The project has mobilised joint Public Procurement of innovation across a number of EU countries to create a **robotic, mobile personal assistant** designed to help elderly citizens live independently at home.

'The project aimed to identify new technologies capable of assisting elderly people in their everyday lives, and also develop tools and support awareness within Europe of the PCP process,' explains programme manager Jon Hazell. 'We believed that with the use of robotics and related technologies, the elderly can continue independent living at home, even if they have physical or cognitive disabilities.'

The project used a Pre-Commercial Procurement (PCP) process as a way of promoting innovation in this field. The PCP process was rolled-out in three phases. Following a call for tender and selection process, the project conducted a feasibility study of the selected technologies and proposals, with the most promising ideas being developed into well-defined prototypes in phase two. The third and final phase verified and compared the first real end products or services in real-life situations.

More info: http://cordis.europa.eu/result/rcn/188523_en.html

The MARIO project (Ireland)

It is pioneering advances in Human Robot Interaction to support patients suffering from debilitating cognitive disorders such as Alzheimer's.

Launched in February 2015, the three year MARIO project builds upon the success of the DOMEO project, the first ever project to bring assistant robots into real homes with real people for a period of more than a year. Robosoft, the coordinator of DOMEO, is now a partner in MARIO and is responsible for achieving functional and system-related improvements of the new version of the Kompaï robot.

More info: http://cordis.europa.eu/result/rcn/188522_en.html

ALFRED project (Germany)

It has integrated robotic and mobile, personalised Butler into a fully functional system that will provide context-sensitive services related to social inclusion, care, physical exercise and cognitive games.

The project has been planned and enacted in an manner that has allowed his team to implement all planned features in time and to budget. However, there were some challenges that they had to overcome. 'We learnt that the user tests took a bit more time than estimated, and we also learnt that the demand for being able to naturally talk to ALFRED was even bigger than expected,' Dr. Abels explained. He also outlined how they realised that different users will interact with ALFRED in different ways, so they have had to ensure that the system is now flexible enough to handle multiple ways of requesting the same service or piece of information.

More info: http://cordis.europa.eu/result/rcn/188516_en.html

Solutions for the prevention and detection of falls

- The FATE project (Spain)

It set the groundwork for the commercialisation of a portable fall detector that can be worn on a belt with all user/device interactions carried out through an easy-to-use Android app.

Since completion of the project in May 2015, a spin-off company - Sense4Care - has sought to bring FATE's positive results to market, based on a use and exploitation rights transfer agreement with the UPC. The company's Angel4 detector is a standalone device that can be worn on a belt, with all user/device interactions carried out through a clever and simple app for Android smartphones.

More info: http://cordis.europa.eu/result/rcn/188519_en.html

- INDONTFALL project (Italy)

The project was launched in April 2012 to deploy, pilot and evaluate a range of innovations to detect falls and prevent injuries. Project partners **provided innovative solutions that were then integrated into a platform**; these were then tested by over 500 elderly patients across Europe.

The platform was flexibly configured to suit the needs of and risk factors associated with fall incidents, which account for approximately 40 % of all injury deaths. Enabling medical experts and health professionals to customise innovative fall solutions to specific end user needs will save lives and cut healthcare costs and to this end, identifying opportunities to commercialise these innovations is ongoing.

More info: http://cordis.europa.eu/result/rcn/188520_en.html

- ISTOPPFALLS project (Germany)

It has developed an 'exergame' and fall-prevention system, including a risk self-assessment programme, which has been proven to help reduce the fall risk of elderly people.

'Evidence-based results have shown that ISTOPPFALLS technology reduced the overall fall risk of those studied by 34 %, rising to 54 % for participants who used the system a lot. Moreover, results showed that participants with the highest risk of falling benefitted the most,' said Dr. Rainer Wieching, ISTOPPFALLS project coordinator.

The project has developed a two-pronged approach to preventing falls. The first is an 'exergame' for a home-video game console aimed at strengthening the lower limbs and improving balance. Users can control and interact with the video game using gestures and spoken commands. Similar to an xBOX game console, it enables full-body 3D motion capture, real-time feed-back and continuous result monitoring adapted to the needs of older adults.

The second involves the extensive monitoring of the participant using a discrete device which is worn as a necklace. The device uses motion capture technology and can test the elderly for balance, lower limb strength, and monitor their activity the whole day.

More info: http://cordis.europa.eu/result/rcn/188521_en.html

Overall Source: http://cordis.europa.eu/article/id/400060-independent-living-in-an-ageing-society-through-ict_en.html