

ICT-PSP- proposal: Safe independent living

Scope: Theme 3 regarding ICT Solutions for fall prevention and ICT and Ageing network.

Implementation measure: Pilot B - stimulating the uptake of innovative ICT based services and products

The University of Agder (UiA) competences and advantages

- A state of the art lab facility for testing is located at the UiA. The facility allows for testing of services and applications adopted for installation in homes with secure 2-way communication to a service provider or health care service. Moreover, the lab facility allows for secure VPN access through plug-in-boxes with open architecture.
- Security and privacy are important aspects in developing new ICT solutions for health care services. The UiA has broad scientific competence and active professors working with related projects for the health care sector.
- The UiA has, through local e-health projects, established networks to the municipality health care services. The local municipalities have therefore built capacities and competence in using ICT in its service production. These networks could be used for testing of relevant systems and sensor technology.

Motivation:

ICT and intelligent sensors could play a vital role in stimulating safe independent living in Europe. A vital challenge today is that the solutions on the market are proprietary, with little flexibility and based on old technology. There exist mature solutions and sensor technology that could improve the structures for preventing falls and detections of falls, i.e. IPv6 and wireless sensor networks. However, to reach the market and to be implemented in the public sector comprehensive testing is necessary.

With the state of the art test facilities located at the University of Agder and the focus the Agder region has put on using ICT and intelligent sensors in the municipal healthcare provision, the region could be one of several areas for testing out new technology. There already exist a number of projects in the region seeking to mature in an international perspective.

Aim:

Improve quality of life and care for the ageing population by providing independent living solutions with focus on fall prevention and detection for elderly people.

The project will focus on the following aspects of fall prevention and detection of falls:

- Development of the sensor technology, data processing and data storage: Sensors create an enormous amount of data that needs to be verified and stored. In case of anomaly the necessary information should be forwarded to planned target groups in the private/public/informal sectors, i.e. next of kin, service provider, municipality.
- Safe and secure data transfer: The forwarded information should be transformed in a safe and secure way.

Proposed projects phases

1. Testing of systems and new technology in the test facilities, i.e.
 - Carry out a wide validation of integrated, innovative ICT solutions supporting falls of elderly people in home settings (institutional settings may also be covered as an additional element).

- Though ICT-based, the test should address how the proposed solutions could form part of wider comprehensive approaches to fall prevention and mitigation.
2. Testing in relevant municipalities
- The solutions shall be tested in real life and a consolidated set of requirements and validated functional specifications should emerge as a result.
 - The solutions shall represent a credible methodology and pilot population for ensuring significance in the evidence of socio-economic impact, for example by involving people who have already experienced falls, however sufficient measures should be taken to guarantee safety of the pilot participants.

Profile of preferred partners:

- State of the art testing facilities
- Software providers that can process sensor data from the home environment, preferably using IP telephony technology
- Developers of sensor technology

For further questions, please contact:

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