**Smart Homes for the Elderly (SHE)**

**Abstract**

A UK research group with expertise in Internet of Things (IoT), and human computer interaction for the disabled is looking for partners for a 2Seas/InterReg project. The project aims to identify how the Internet of Things technology can create a Smart Home that improves the quality of life for the elderly and infirm.

**Description**

As people are living longer there has been a large rise in the proportion of elderly people living in the 2 Seas region, as people prefer to retire to the countryside and/or along the coast. A reality of aging is decreased mobility. As care home provision is very expensive there is an emphasis on pensioners staying in their own homes supported by home help as this can be more cost efficient. Unfortunately, quality of life deteriorates for ‘stay at home’ pensioner as many become essentially more housebound as they grow older and more infirm. A second consequence of being housebound is loneliness, which is another important issue that needs addressing.

This project proposes turning an elderly person’s home into a ‘Smart Homes for the Elderly’ (SHE). ‘Internet of Things’ devices will be used to facilitate remote control and a level of automation to assist the infirm. SHE will also facilitate communications with third party care providers, for remote monitoring plus offer dedicated ‘social networking’ activities for those housebound to combat loneliness.

The elderly have not grown up with technology and are therefore less likely to embrace it like the younger generations. Additionally, they are less able to interact with such technology that requires high precision touch control, good vision, etc. due to their deteriorating physical health. As such a key challenge of this project will be to develop an appropriate physical interface for SHE.

Therefore, the objectives of the project would be to:

* Review the ‘state of the art’ of IoT technology and identify appropriate systems towards use in SHE, which includes development of a suitable interface.
* Create a number of candidate homes where this technology is installed and tried “in situ” to learn about its suitability and benefits to all stakeholders (users, family, care takers, etc.).
* Identify emerging technologies and their ability to integrate them into future system developments.
* Create a framework that makes the design and implementation of these technologies accessible.
* Dissemination activities to inform the community about the benefits of these new approaches, but also towards the technology developers to ensure they develop new technologies that are suitable for this target audience.

**Target Partner Expertise Sought:**

The project would benefit from partners which can contribute to this novel development with the following expertise:

* Care providers who would need to interact with the system, but may also be able to interact and remotely access/control/perform certain activities.
* Local governments / social services who have an duty of care towards their citizens and are looking for new ways to provide this care in the context of e.g. people living remotely.
* Technology partner that designs/delivers smart home and/or IoT technologies that are aimed at some of this audience or can be adjusted to this target audience.
* Charitable Organisations
* Social Science partner with expertise on technology integration for the target user group and measuring the effectiveness of such integrations.