



Behaviour pattern based assistant  
for Early Detection and Management  
of Neurodegenerative Diseases



## What is BEDMOND?

> BEDMOND is a European R&D project, co-funded by the AAL Programme.

> The objective of the project is to develop an ICT-based system for an early detection of Alzheimer's disease and other neurodegenerative diseases, specifically designed for elderly people while living at home.



## Who are the target users of the BEDMOND system?

- > Elderly people oversensitive to MCI.
- > Health Care professionals.

## How does it work?

> The BEDMOND system tracks the daily activities of elderly people, providing data and information of various kinds relevant for the diagnosis process.

> The gathered data is taken from a home sensors network and is continuously processed by a rule-based engine. This engine evaluates daily activities based on patterns configured on the basis of a wide range of medical knowledge. This pre-processed, integrated information is presented periodically to a medical expert who determines whether detected user behavior changes may indicate the beginning of a cognitive decline or just a casual deviation.

> After the detection of a significant change in behavior, standard clinical exams are carried out to further evaluate the possible beginning of a disease. During medical treatment the physician will continue to use the BEDMOND system to further monitor the patient and the effectiveness of the treatment under course.

## Benefits

- > Early diagnosis of neurodegenerative diseases in elderly people and beginning of treatment at an early stage.
- > Continuous monitoring of the user evolution during the treatment.
- > Creation of additional medical knowledge of the evolution of neurodegenerative diseases.
- > More autonomy for elderly people who may live longer at home; increase of their quality of life.
- > For the public: reduced costs for health care systems with the treatment of neurodegenerative diseases.

## Applied technologies and standards

### > Technology:

- . Multi-sensor network at home.
- . Communication and computation appliance (Setup Box).
- . Application and System Software developed by the BEDMOND project partners.

### > Standards:

- . ISO/IEC 24752 Universal Remote Consoles.
- . CEA-2018 Task Model Description.
- . ISO/IEEE 11073 Health informatics.
- . ISO 9241 Ergonomics of Human System Interaction.
- . OSGI (Open Service Gateway Initiative) specification.
- . EN 50134 Social alarm systems.

### Participants



Spain



Spain



Austria



Austria



Portugal



Spain



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