Providing robotic carers and smart systems for the elderly

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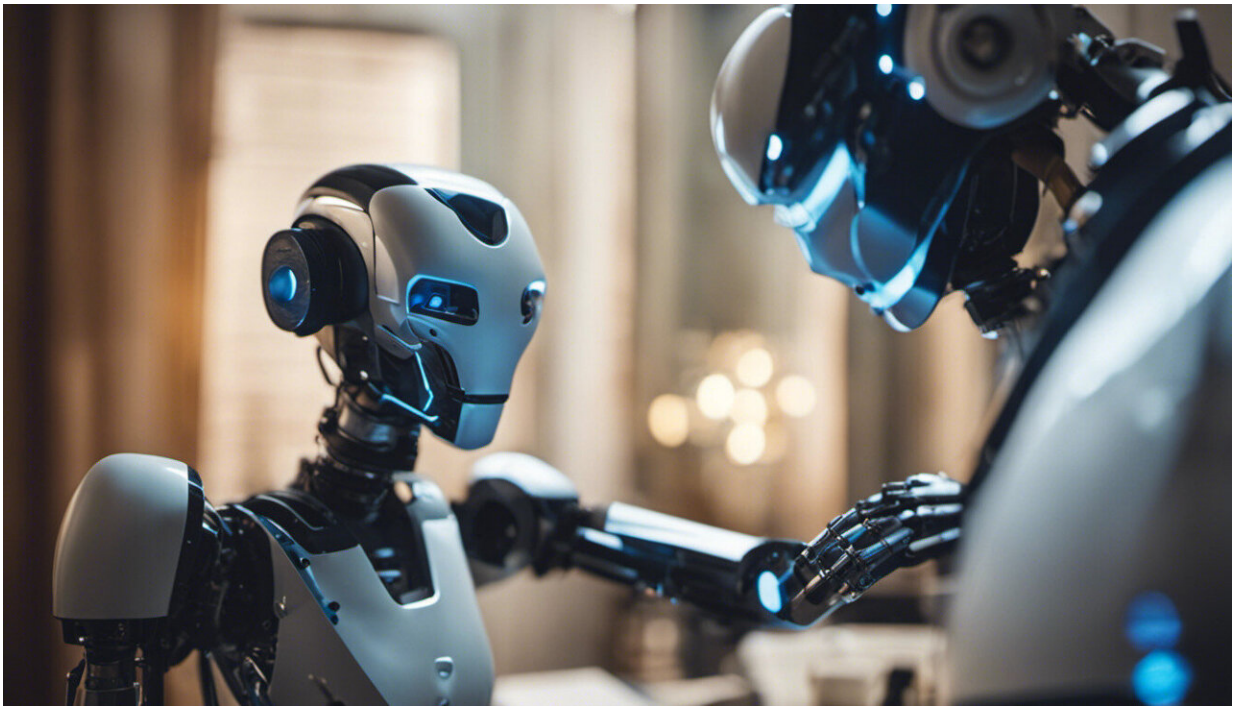

Credit: AI-generated image (disclaimer)

As people enter old age it can become increasingly difficult to maintain a good quality of life without help. Perhaps a faltering memory leads to missed meals or drinks, or a decrease in mobility leads to loneliness and social isolation. Many elderly people are lucky enough to have a carer, but sometimes that person - maybe a partner - is also of a similar age and

may need help caring for the other.

A team of European universities, research institutes, commercial companies and care organisations have been working on a new type of social carer which can provide help in these and other situations. The EU-funded Mobiserv project has been working for the past three years to create a robot companion for older adults that can remind them about eating, drinking and taking medicines, offer structure throughout the day, and help people to stay active by suggesting a variety of activities.

For example, when a person does not drink for a certain time, which can lead to dehydration, the robot will approach them and encourage him or her to drink, or even suggest a specific drink, based on their preferences or needs. The same holds for food, physical exercises, activities, and also for social contacts. If a person does not communicate with anyone else for a while, the robot will suggest they make a call, or go out to visit someone - helpful advice for those at a risk of social isolation.

The robot is one component of a larger automated system that Mobiserv is developing for elderly people. It includes wearable smart clothes - which can, for example, monitor vital signs or sleeping patterns, and detect falls - and a smart home environment. This will consist of smart sensors, optical recognition units, and home automation elements, to detect, among others, eating and drinking patterns, activity patterns, and dangerous situations.

Mobiserv began in December 2009 and a prototype for the social companion robot was developed in the second year of the project after conducting extensive research with end-users and their formal and informal carers.

Based on the findings and the prototype tests, the robot and other Mobiserv services are being improved and fine-tuned to be useful,

acceptable, and fun to use.

To find out how people experience and feel about this addition to their home, researchers from the University of the West of England in Bristol (UK), the Smart Homes Institute in Eindhoven (NL), and care organisation Ananz in Geldrop (NL) will perform extensive user evaluation studies with the robot companion in the coming months. These will vary from usability tests in a home lab, through full-day experience tests in a test home, to multi-day experiences in people's own homes.

In the upcoming evaluation, people will freely use their robot companion, and carers will personalise and use the system to support their loved ones. The purpose of the evaluation is to enable end-users and caregivers to experience what Mobiserv can do for them, to further improve Mobiserv, and to find out how to go about bringing this robot to market. The ultimate goal is to enable people to support themselves, and others, in their wellbeing and independence.

The user evaluations will take place from April to June 2013, both in the UK and in The Netherlands. From June to August, the Mobiserv project and its companion robot will be presented and demonstrated at several events throughout Europe.

More information: For more information, please visit: www.mobiserv.info/

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