EU-Japan cooperation on Novel ICT Robotics based solutions for active and healthy ageing at home or in care facilities

The call will address joint research and innovation proposals for developing and demonstrating advanced ICT Robotics based solutions for extending active and healthy ageing in daily life.

Proposals should build on advances in this domain, and should combine multi-disciplinary research involving behavioural, sociological, health and other relevant disciplines. Characteristics of the solutions developed should be their modularity, cost-effectiveness, reliability, flexibility in being able to meet a range of needs and societal expectations, applicability to realistic settings, safety and acceptability to end-users. Gender and ethical issues should be paid due attention.

In order to support older people in ordinary daily life at home and in care facilities, proposed solutions should be driven by the needs, interests and lifestyles of older people through personalised and self-adaptable human-robot interaction. The proposed solutions should also provide a sense of stability and comfort, and reduce the burden on caregivers in time and labour costs. The proposed solutions should further develop and build upon open platforms[[An open platform describes a software system which is based on open standards, such as published and fully documented external application programming interfaces (API) that allow using the software to function in other ways than the original programmer intended, without requiring modification of the source code. Using these interfaces, a third party could integrate with the platform to add functionality. The opposite is a closed platform. An open platform does not mean it is open source, however most open platforms have multiple implementations of APIs. Proposers are encouraged to work with open platforms like FIWARE and UniversAAL where relevant.]] and Internet of Things approaches. There should be a
system integration approach between robotics devices, intelligent living environments, which can support novel service delivery models, including the integration of robots, home (indoor) sensor networks, and handling of big data and IoT data in the cloud.

The proposed work should develop novel service models for facilitating prolonged independent living and support prevention of care/efficient delivery of care in accordance with the proposed applications and services (such as maintenance of cognitive function or well-being etc.) and improvements in social situation (living assistance and reduction of isolation and loneliness etc.) and empowering older people to make the most of their remaining faculties (engaging in housework and hobbies etc.) and reducing the burden on caregivers.

The proposed application fields should demonstrate how solutions can be designed to allow for adaptation towards different histories and cultures across the EU and Japan and a variety of individual perception and preferences and cognitive capabilities.

There should be realistic test sites in both the EU and Japan with sufficient users involved to validate the expected benefits and impact.

In order for the ICT robotics service to be accepted in real life, it is necessary to ensure Ethical, Legal, and Social Issues (ELSI). Appropriate consideration on ELSI is required in both the EU and Japan.

In order to spread services, extensive use of generalized infrastructures such as a cloud system and open sources are required.

Without limiting the use of specific applications or hardware systems, platform approaches are required to ensure interoperability as well as contributions to appropriate ongoing or new standardization work.

The European Commission considers that proposals requesting a contribution from the EU of between EUR 1 and 2 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Citizens in ageing European and Japanese populations wish to stay in their homes for as long as possible. They are however at risk of age related impairments such as poor health, cognitive impairment, frailty and social exclusion with considerable negative consequences for their independence, quality of life, that of those who care for them, and for the sustainability of health and care systems.

- To extend the independence and autonomy of older persons in need of care for example through reduction of admissions and days spent in care institutions, and prolongation of time spent living in own home when ageing with emerging functional and/or mental impairments.
- To provide high quality service corresponding to the needs in daily lives of older persons.
- To improve quality of life of older persons and their carers.
• To reduce caregivers burden due to work sharing with robots and supplement/complement human resources in care service provision allowing consecutive services such as 24-hour ones.
• Improvement of efficiency in care provision.
• Global leadership in advanced solutions supporting active and healthy ageing

Last update: 29 November 2016
Record number: 700792


© European Union, 2022