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CONFERENCE ABSTRACT

Pre-Commercial Procurement enabling care innovations for the elderly

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Purpose: The SILVER (Supporting Independent LiVing for the Elderly through Robotics) project is a development project funded by the European Commission under the Seventh Framework Programme for research and technological development (FP7) with 13 partners from five countries (Denmark, Finland, the Netherlands, Sweden and United Kingdom). The project aims to deliver new technologies to assist elderly people in their everyday lives. Through the use of robotics-based technologies, the elderly can continue independent living at home even if they have physical or cognitive disabilities. The new technologies and solutions are brought to the market using a Pre-Commercial Procurement (PCP) process with 3-step competition structure. In Europe, PCP has so far been an under-utilized tool for promoting innovation. One of the aims of the SILVER project is to demonstrate the effectiveness of this approach in addressing societal and governmental needs. This ambitious objective has been accomplished by running a cross-border Pre-Commercial Procurement Call for Tender, which has enabled development of robotics-based innovations for the elderly care.

Context: Both the Commission and the European Council acknowledge that the impact of demographic ageing calls for a strong response. The SILVER project aims to ensure that, by 2020, new solutions implemented in elderly care will make it possible to care for 10% more care recipients with the same number of care givers. At the same time, it aims to increase the quality of life for the elderly by making them more independent and improving their health. With the 3-step Pre-Commercial Procurement process developed in the SILVER project, municipalities and other public sector actors are able to identify new technologies and services to better meet the needs of the elderly as well as the demands of their ageing populations.

Methods: In order to stimulate the possibility of more radical approaches being proposed and "out of box" thinking being used, the challenge description was phrased as an open challenge. Instead of providing the contractors with a technical description of the desired product, SILVER put together functional specifications, describing the challenge to be addressed and the desired outcome. During the spring of 2013, an open competition was run to find solutions to the challenge of Supporting Independent Living for the Elderly through Robotics. The challenge in the call for tender was specified to fit the scope of an R&D service, with at least 50% of the contract value relating to services. All tenders were evaluated using the same criteria regardless of the geographical location of company, company size or governance

structure. By the autumn of 2015, the Pre-Commercial procurement process had reached phase 3, which saw proposals from two companies, of which only one was awarded a contract. Moving forward, the remaining contractor will be able to test its solution – LEA (Lean Elderly Assistant), the first robotics based mobile personal assistant – in a real-life environment in all of the six partner municipalities.

Results and discussion: There has already been a wide interest in LEA, which has been developed by Robot Care Systems to enable the elderly to live independently at home. LEA has won several innovation competitions, most recent being the Herman Wijffels Innovation Award in the Netherlands. The jury stated the following:" The LEA is a care robot with a functional form and state-of-the-art technologies and capabilities. It does not replace human contact, but ensures that older people can remain independent longer. The development is truly based on the needs of future users." In practice, this means that LEA is able to help the elderly with daily routines and housekeeping. It also stimulates the elderly to stay active and can act as a personal trainer. Because of these functionalities, LEA can also be used for rehabilitation. Furthermore, in Phase 3 of the Pre-Commercial Procurement process, cognitive software will be added in order to enable LEA to remember and recognize objects, faces and places. By the time of the International Conference on Integrated Care in May 2016 in Barcelona, the SILVER project will have advanced into the testing phase; therefore, experiences related to the procurers' live testing, perspectives from the end users and care staff, as well as details of the solution's performance will be available.

Keywords: pre-commercial procurement; pcp; independent living; robotics; elderly care