Agile CoCreation of Robots for Ageing

Deliverable 7.1
Needs study evaluation

Project:	ACCRA
Project Number:	738251
Deliverable:	D7.1
Title:	Needs study evaluation
Version:	V1.0
Date:	22/12/2017
Confidentiality:	Public / Consortium
Authors:	Dr. Marleen de Mul (EUR) Dr. Isabelle Fabbricotti (EUR) Bahareh Beyk MSc (EUR) Michael Tsui MSc (EUR) Eloïse Sengès (Dauphine) *With input from all other partners and third parties*

Funded by

Table of Contents

List of Figures

List of Tables

Abbreviations and Definitions

Abbreviation	Definition
ICT	Information and Communication Technologies
ACCRA	Agile CoCreation of Robots for Ageing

Executive Summary

With the ever increasing elderly population, different stakeholders have been searching for new methods to address the growing elderly population and their respective healthcare needs. A consequence of people becoming older is that progressively more people are experiencing (medical) issues or are suffering from multitude of disabilities due to old age. Reducing healthcare costs while providing efficient and effective care for the elderly is a difficult task. To support elderly and to improve their quality of life, it has been proposed that robotic solutions can contribute.

In the ACCRA project, funded by Horizon 2020 two socially assistive robots are being developed through a co-creation process in which robotics engineers, elderly, formal caregivers, informal caregivers and social scientists work together to optimally adapt the robots to the needs of elderly. The project consists of four phases: needs study, co-creation, experimentation and sustainability. In this deliverable we report on the results of the first phase, the needs study. The central research question for the needs study phase was: *What kind of problems do the elderly experience in their daily life and what are the perceptions about socially assistive robots?*

We performed empirical, qualitative research in four countries to answer this question, and have a baseline for the next phase of the ACCRA project. To bring more focus to the research, we explored three use cases in which robotics could have added value for older persons: mobility support, support with general daily activities, and support with socialisation and conversation. These three use cases were selected already in the phase of drafting the research grant proposal, because the robots selected for ACCRA were able to cover these use cases.

The needs study consisted of three parts. Firstly, we interviewed elderly, formal and informal caregivers in four countries. Secondly, we collected data about the contextual factors in each country through a questionnaire. Thirdly, we discussed the lessons learned during this phase of the ACCRA project in a focus group. In total, interviews were performed with 57 elderly, 57 formal caregivers and 33 informal caregivers.

The needs expressed during the interviews could be clustered in these groups: safety needs, companionship needs, communication needs, well-being needs, entertainment needs, forgetfulness/reminder needs, physical mobility needs, other physical needs, outdoor needs, perform medical tasks and some needs specific for caregivers. Overall, the elderly population we interviewed, have a positive perception of the robots and they seem to accept them. However, the balance between positive, neutral and negative differs between the countries. For example, they appreciate the feeling of safety and companionship a robot can bring, but they have concerns about privacy, ease of use and cost.

The contextual factors need further analysis in the context of the work on sustainability (phase 4 of the project), but it is already clear that in all countries robotics in elderly care is a topic discussed by policy makers and the general public. The differences between the countries with regard to their health system, affect the decision to invest in robots and they business models around it: who should pay; the elderly or a care organization?

A lesson learned from the needs study phase is that such projects could be biased because elderly with a prior interest in technology might be over-represented.

The role of this deliverable in the ACCRA methodology

This deliverable matches Task 7.1 from the project plan and brings together the results of the needs study phase by integrating the results for the three use cases and investigating the contexts of the pilot sites.

FOR MORE INFORMATION, PLEASE CONTACT THE COORDINATOR OF THE PROJECT

Trialog
Antonio Kung
Antonio.kung@trialog.com

Kyoto University
Yasuo Okabe
okabe@i.kyoto-u.ac.jp