

Deliverable 5.1

Criteria for selection of test sites

Lead Partner:	Coöperatie Slimmer Leven 2020
Authors:	Joyce de Laat, Marcel de Pender, Carina Berg
Contributors:	Municipality of Skövde
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1. Introduction

In this deliverable the criteria for the selection of users to be involved in the pilots are identified, in order to favour the evaluation of the impact of the deployed services for improving the autonomy of elderly people in the activities connected to feeding. Based on this document households were selected to become part in the HELICOPTER project.

2. User criteria

To make as much use of the HELICOPTER project we would like to recruit participants who were still living in their own houses, with no special alarm or dedicated health services available; do not suffer from any major disease and still have an independent lifestyle. The HELICOPTER target group should consist of seniors who still feel young enough to live alone, but who start realizing that ageing is approaching and they might want to get the opportunity to be monitored before the onset of a disease raises. HELICOPTER own value lies on its predictive capability against the possible onset of unhealthy behavioural patterns or diseases, that would inevitably affect the current independence of the persons. Therefore we would like to make a distinction between fit and frail elderly defined by Woodhouse and colleagues in 1988¹.

“The fit elderly are individuals, over 65 years of age, living independently at home or in sheltered accommodation. They are freely ambulant and without significant hepatic, renal, cardiac, respiratory or metabolic disorder on either clinical examination or laboratory investigation. They do not receive regular prescribed medication. The frail elderly are individuals, over 65 years of age, dependent on others for activities of daily living, and often in institutional care. They are not independently mobile - whilst they do not have overt cardiac, respiratory, hepatic, renal or metabolic disease minor abnormalities may be revealed on laboratory investigation. They may require regular prescribed drug therapy. Conditions contributing to frailty commonly include Alzheimer's disease, multiinfarct cerebrovascular disease, Parkinsonism, osteoporosis, osteoarthritis, and healed fracture events”

The user criteria have been summarized below:

- 65+ years
- Living independent
- Receive no formal care
- Have a social network (family, friends, neighbours)
- Mentally fit
- Not suffering from severe chronic diseases
- X% living alone, X% living together as a couple
- X% living in a city, X% living in a rural area
- X% male, X% female

¹ Woodhouse, K.W., Wynne, H., Baillie, S. James, O.F.W, and Rawlins, M.D. (1988). *Who are the Frail Elderly?* Quarterly Journal of Medicine, New Series 68, No. 255, pp. 505-506, July 1988



3. Set up / time line

According to the project plan and its planning should the *Pilot Start Up* start in M16-M24, meaning October 2014 till June 2015. The *Experiments and Data Collection* are planned to start from M19 to M33, meaning January 2015 till March 2016.

		Y1				Y2				Y3			
		M1-M3	M4-M6	M7-M9	M10-M12	M13-M15	M16-M18	M19-M21	M22-M24	M25-M27	M28-M30	M31-M33	M34-M36
WP1 (M1-M36)		Project Management											
1.1	project coordination												
1.2	technical management												
1.3	communication												
1.3	dissemination and outreach activities												
WP2 (M1-M27)		user-centered design research											
2.1	Initial User and Context Studies												
2.2	Developing Prompts and Interaction Design Strategies												
2.3	Design for Meaningful Awareness of Data												
2.4	User Interactions & Design Concepts												
2.5	Learning and Behavior Strategies												
2.6	Target User Group Profiling												
WP3 (M1-M24)		tools and infrastructure											
3.1	Clinical Sensors												
3.2	Environmental Sensors												
3.3	Wearable/mobile devices												
3.4	Networking and supervision												
3.5	User's interfaces												
3.6	Pilots setup												
WP4 (M1-M21)		models											
4.1	Domain's definition												
4.2	System ontology												
4.3	Data analysis: tools and models												
4.4	Testing and validation												
WP5 (M10 – M36)		Trials and exploitation											
5.1	Identification of pilot users												
5.2	Pilot start-up												
5.3	Experiments and data collection												
5.4	Pilot exploitation in shared facilities												

At this moment we are talking with Summa College, senior secondary vocational education who are teaching level 2 nursing and care students. Because jobs of these type of students are disappearing they need to be re-schooled in order to stay valuable within the work field. Therefore they would like to explore if these students could educate and guide elderly people in the introduction to the use of new health innovations and technologies. We are now discussing a model where these students will recruit elderly persons and guide them through the HELICOPTER pilot, from introducing the project and technology, to providing support during, to evaluate the pilot according to of course the HELICOPTER requirements.

Since it will take some time till we can test the Helicopter technologies and sensors, we have organised a small pre-pilot using a local sensor-based innovation called Activ8 on about 10 participants. The Activ8 exists from a intelligent physical movement monitor, the Activ8 activity tracker, in combination with a Activ8 personal online dashboard. With a class of students we would already try out the procedure of



recruiting, testing, supporting, evaluating etc. before the real Helicopter pilot with 40 participants in Eindhoven and 10 participants in Skövde kicks off. To make the Helicopter pilot procedure as effective as possible we would already like to use the same (or similar) methods and questionnaires during this test pilot.

Since the HELICOPTER system and infrastructure has not yet been tested and validated we propose that the start of the HELICOPTER pilot will be postponed to September 2015 (instead of the initial start of January 2015).

4. Back up plan

The HELICOPTER project has several project risks, of which the validation of the HELICOPTER sensors and infrastructure is the most evident risk. Delays in the development and validation of the sensors and infrastructure will lead to delays in the pilot implementation since the data collection is depending on the HELICOPTER system. Because of the large amount of participants (50+) this directly means to a large exposure when the technology or planning is failing. Therefore it is desirable to have a back-up plan in place when necessary.

CSL2020 would like to bring in an expert who will judge the pilot-set up and the technology that will be used within the experiments. This expert will evaluate the feasibility of the technology and potential of the experiment before the participants will be recruited and informed. With a negative advise (failing technology, failing services) CSL2020 would still like to continue the pilot experiment, but replace the risk factors. Therefore back up technology possibilities will be explored.

