

PCP SILVER – Challenges from Phase 2 – Phase 3

Supporting Independent LiVing for the Elderly
through Robotics

Carla Dekker (WP leader SILVER Call documents)

Ministry of Economic Affairs, Netherlands Enterprise Agency



This project has received funding from
the European Union's Seventh Framework
Programme for research, technological
development and demonstration under
grant agreement no °287609.



Content

- PCP Silver
- Testing in Phase 2 and Phase 3
- Bid Phase 3
- Competition on price
- Assessment of proposals

SILVER Challenge: make elderly more self-reliant + less care from care givers

- Care for 10% more elderly with the same amount of staff in 2020
- Need for new robotics solutions that can take over all or part of the work of care givers
- These robotic solutions should target assisting elderly and those caring for them with personal activities of daily living
 - Personal hygiene and grooming
 - Eating and drinking
 - Functional transfers, etc.



Project overview

- SILVER: Supporting Independent LiVing for the Elderly through Robotics
- The SILVER project searches for new robotics based technologies to assist elderly people in their everyday lives by using a Pre-Commercial Procurement (PCP) process.
- Duration: January 2012 – August 2016
- Funded by the European Commission under the Seventh Framework Programme for research and technological development (FP7)
- Budget 2,150,000 Euros
 - 5 countries contributing each 250,000 Euros
 - EC contribution 1,000,000 Euros

Project objectives



1. To establish an agreed PCP process across Europe
 - Generic process
 - Templates for all documents
2. To use the PCP process developed to run a call for tender addressing new robotic based solutions to support independent living for the elderly.



By 2020 new solutions are expected to care for 10 % more care recipients with the same number of care givers.

How to
do it

Do it

SILVER Consortium

Procurers:

- City of Stockport (UK)
- City of Eindhoven (the Netherlands)
- City of Västerås (Sweden)
- City of Odense (Denmark)
- Region of Southern Denmark
- City of Vantaa (Finland)
- City of Oulu (Finland)

Innovation partners:

- Innovate UK (Coordinator)
- Netherlands Enterprise Agency
- Brainport (the Netherlands)
- Vinnova (Sweden)
- Forum Virium Helsinki (Finland)
- Aalto University (Finland)

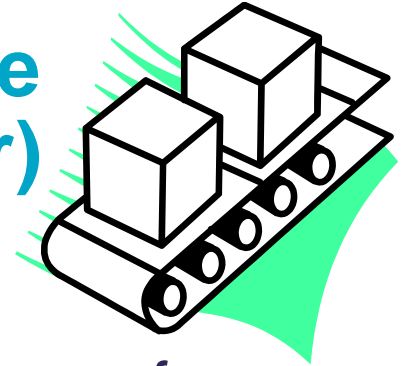
Contractors Phase 2

Prototype development and testing in Living Lab

- **HelpingHand:** an intelligent robot arm that supports a person who loses his stability and fears falling or actually falls
- **Iron Arm:** a light and ergonomic soft robotics device that supports both hand and arm during independent execution of activities of daily living
- **LECOROB:** a care robot assisting elderly with various activities of daily living, provides physical and social support



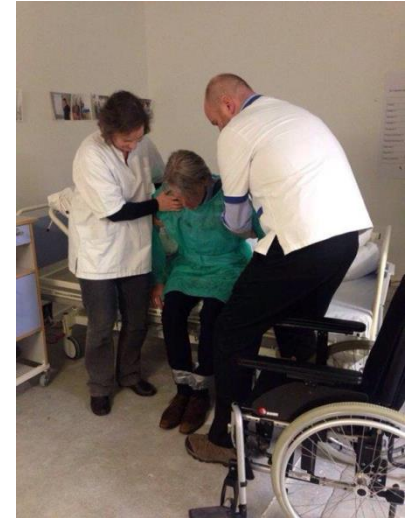
Phase 3: Pre-Commercial small scale product/service development (1 year)



- Up to 3 contractors
- Aims to verify the full feature set and performance of solutions in real-life conditions
- Expected output from companies: Field testing, field test specifications, specification of the final solution & related technical documentation, updated cost/benefit evaluation
- Testing in all five countries by the procurers in people's homes
- The combined budget up to 1,080,000 Euros.

April 2015 Testing Phase 2 Prototyping

- Central assessment of prototypes in living lab in Denmark in relation to the Challenge (stay independently at home)
 - Independence
 - Quality of life
- And also
 - safety
 - time savings
 - Usability
- Test plan as annex to the Call-off contract Phase 2 based on Contractor's input testing document



Test results Phase 2 in Bid Phase 3

Guidance Bid Form Phase 3

- The test report includes results of
 - test assessment
 - recommendations/suggestions on issues that need to be improved.
- In the bid the tenderer has the obligation to address all recommendations/suggestions made in the test report



Jan-June 2016 Testing in Phase 3 Test Series

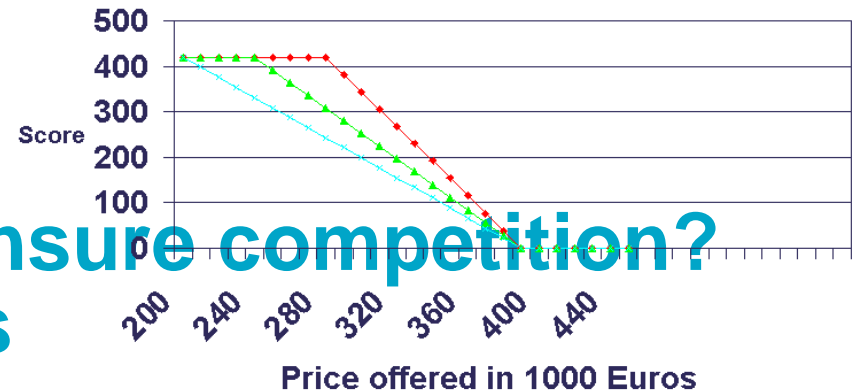
- Assess all prototypes, in all 5 participating countries with 5 end users, 1 month per country, 5 prototypes per solution ➡ 5 months for testing!
- Assess: do prototypes meet needs of both CA's **and** end users
Prototype will be assessed in terms of
 - Quality of life; the effects on the independent living of end users
 - Time saving
 - Local differences (among test locations)
 - Usability
 - Safety – 1st day will be safety testing without end users
- Country-specific test plans as annex to the Call-off contract Phase 3 and based on Contractor's input testing document
- Assigned an overall test coordinator from SILVER consortium

Phase 3 testing – under discussion

- **Safety.** CE Marking: expensive and too early for our prototypes, as adjustments may be required on the final product
- **Test on elderly.** The solution will not have been tested / certified at an accredited institution that can test these devices at this stage: How to enable testing in real life situation? Are we allowed to test with elderly people in their homes? Or will it be actors?
- **Test environment.** Can we test in people's homes? Or will it be in a home-like or controlled environment? What if a situation does not occur during testing period?
- **Insurance and liability.** What is a reasonable minimum threshold for insurance we can ask the Contractor? How to limit his liability in the event that something goes wrong or someone gets injured as a result of an accident / malfunction etc.
- **Malfunction of prototype.** Probably ask for e.g. 80% availability

Price Phase 3: how to ensure competition?

Weighting : 1/3 of points



- 3 contractors in Phase 2 - Max. 3 contractors in Phase 3
- We demand 5 prototypes: some prototypes are more expensive
- Option 1 – 1/3 of budget - maximum price of approx. 378,000
 - Risk: all tenderers bid max price since there is budget for everyone. No competition on price. There may not be enough money to produce the number of prototypes needed for Phase 3 testing.
 - Pro: all projects can be funded if they score above threshold for impact and quality
- Option 2 – Maximum price of 450,000
 - Risk: Only 2 contractors can go through to Phase 3 even though all 3 could have passed on merit.
 - Pro: competition on price. Also, a more expensive project can be contracted as well if the impact and quality are high
- Option 3 – No maximum price
 - Risk: Only 1 contractor makes it through to Phase 3 even though other 2 could have passed on merit
 - Pro: competition on price. Also, a more expensive project can be contracted as well if impact and quality are high

Assessment of proposals Phase 3

Phase 2

- Experts gives scores based on bids (paper)
- Discussion between experts and procurers
- Unanimity

→ despite discussion none of the experts wanted to change their scoring, so ranking of proposals did not change

Phase 3

- Experts gives scores based on bids (paper)
- Interviews

Thank you!

www.silverpcp.eu

Carla Dekker

Team Innovation Procurement
Netherlands Enterprise Agency
(RVO.nl)

carla.dekker@rvo.nl

