

Robotics in Elderly Care

The ACCRA-project

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Presentation

- Background
- The ACCRA-project
- The robots

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Background

- Ageing of the population
- Shrinking workforce
- Burden informal caregivers
- Ageing in place



ACCRA: goal

Agile Co-Creation of Robots for Ageing

To enable the development of advanced ICT Robotics based solutions for extending active and healthy ageing in daily life by defining, developing and demonstrating an agile co-creation development process.

Use case domain	Application	Description
Mobility	Support and coach for walking	Robot helps user to stand up and walk (physically as a coach)
Daily life	Housework	Companion robot coaches users on housework
Socialisation	Conversation rehabilitation	Companion robot engages with users using voice communication capabilities

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ACCRA: partners

instituut Beleid
& Management
Gezondheidszorg



Erasmus Universiteit Rotterdam,
Nederland



Dauphine Universiteit Parijs, Frankrijk



Sant'Anna Universiteit Pisa, Italië



Kyoto Universiteit, Japan



Kobe Universiteit, Japan

TRIALOG

Trialog, Frankrijk

BLUE FROG
THE ROBOT COMPANY

Blue Frog Robotics, Frankrijk



Connect Dot, Japan



IRCCS Fondazione Casa Sollievo della Sofferenza,
Italië

wvo zorg
Samen voelt beter



WVO Zorg, Nederland

ACCRA: The robots (1)



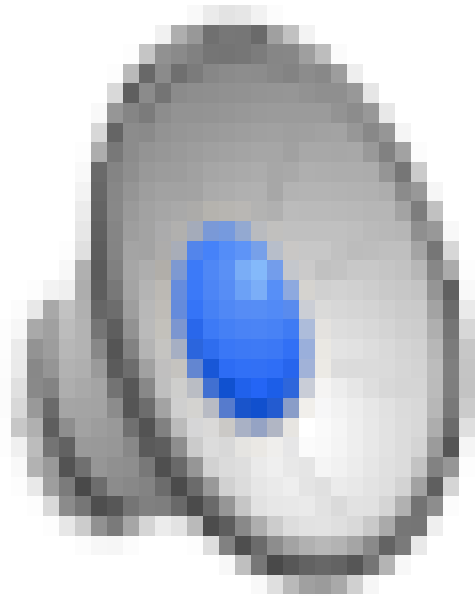
Astro



Buddy

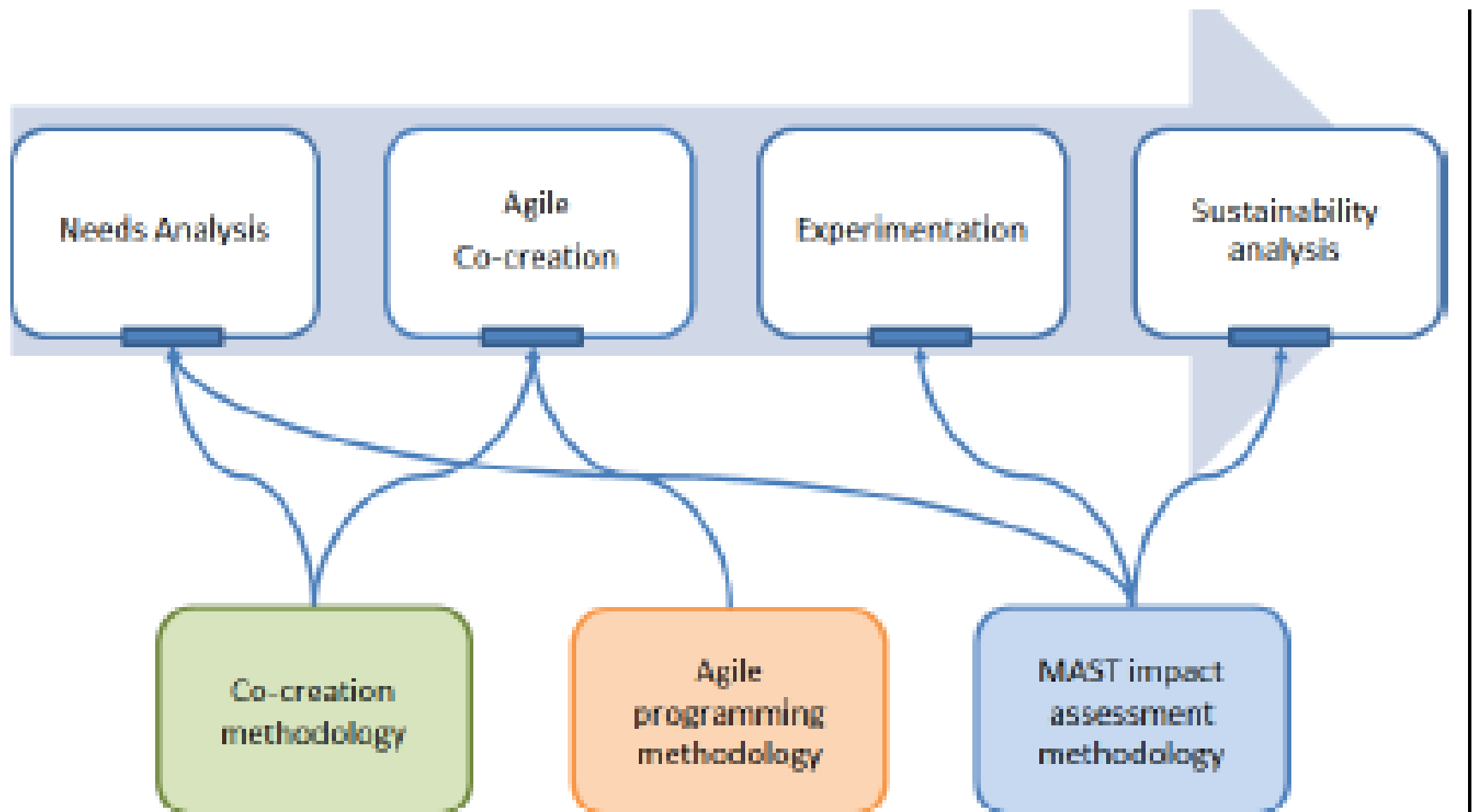
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Astro in action



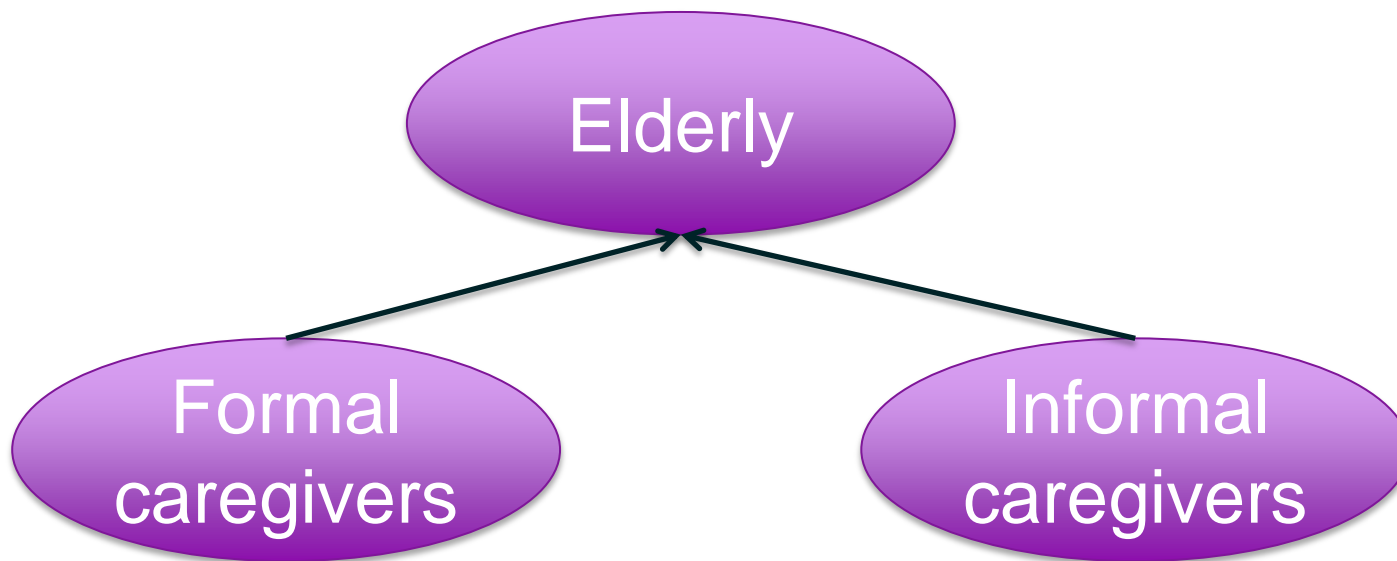
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ACCRA: methodology



ACCRA: need analysis

- Needs of elderly
- Behaviors of elderly
- Expectations of robotica
- Contextual analysis



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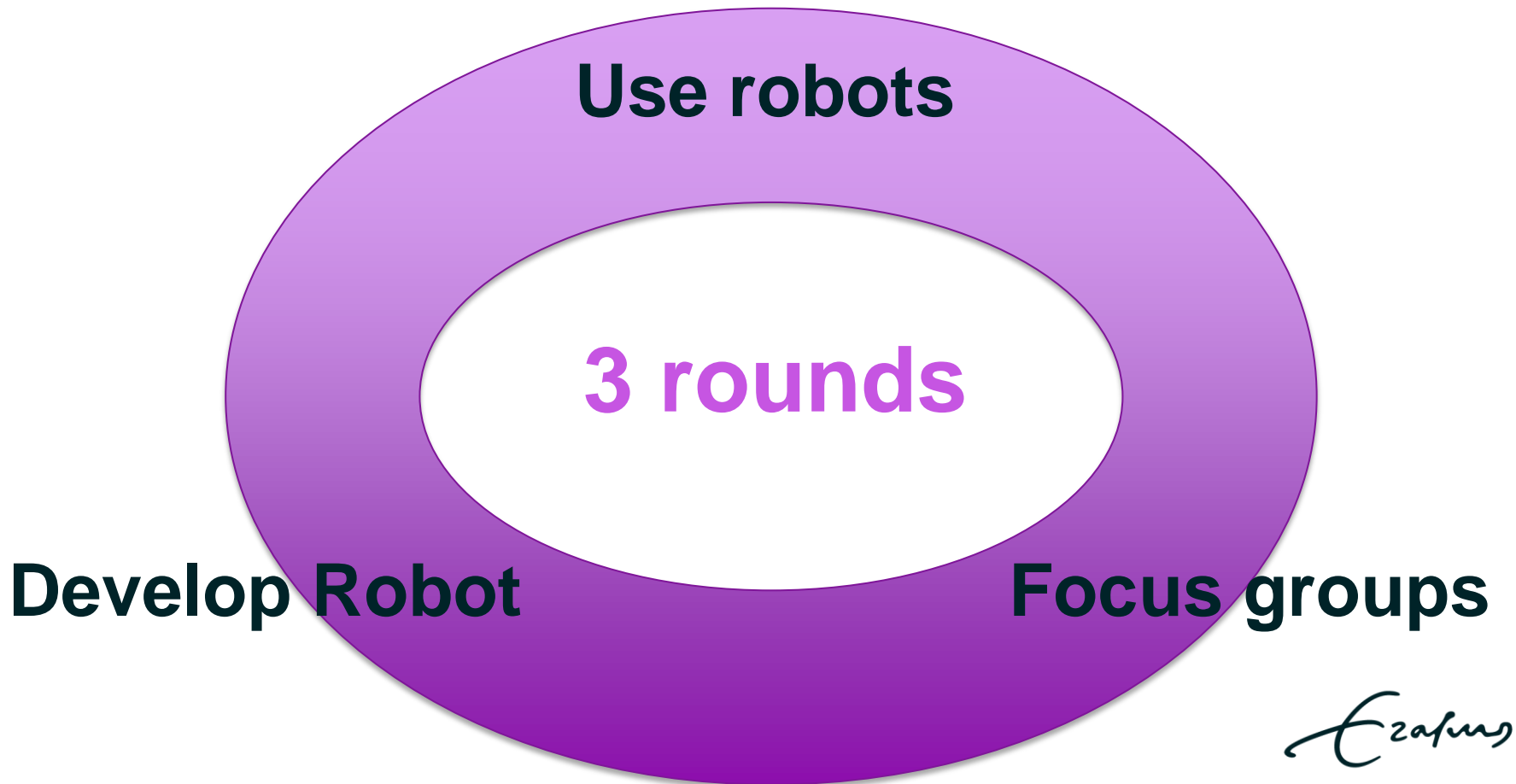
Prototype 1



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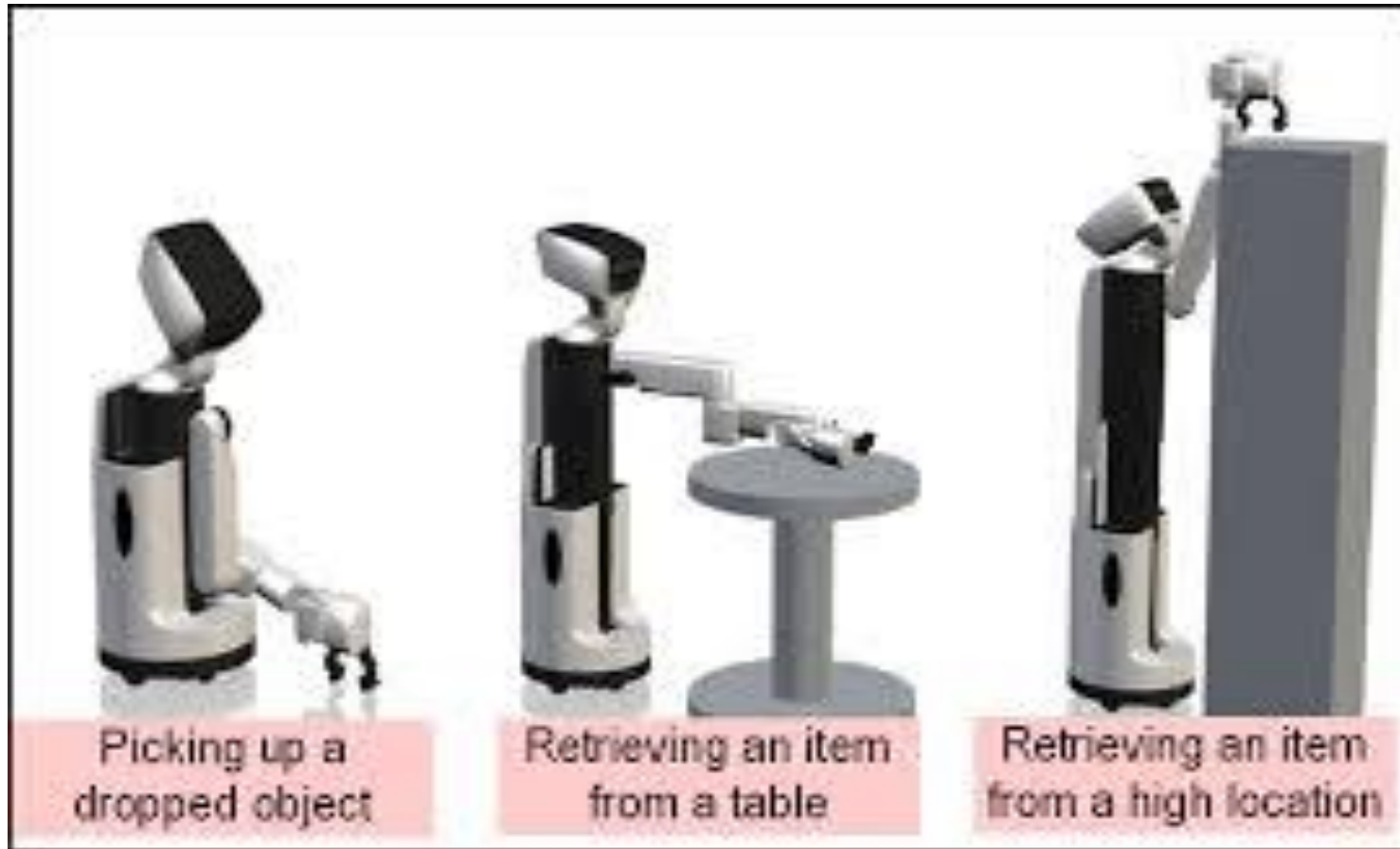
ACCRA: co-creation (1)

Design a robotics solution that meets the needs and expectations of elderly, informal and formal caregivers



ACCRA: co-creation (2)

Final prototype

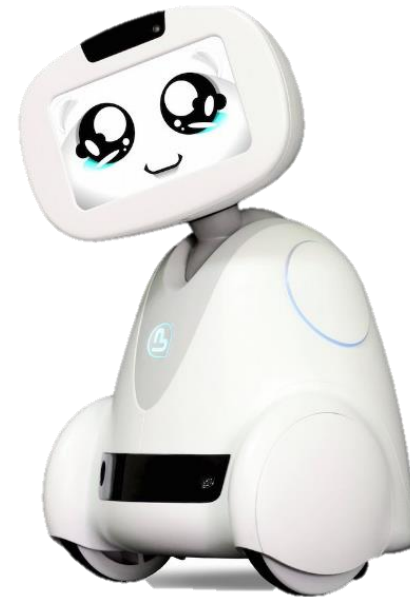


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ACCRA: The robots (2)



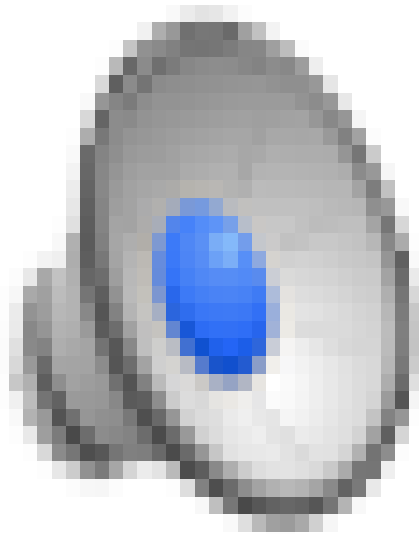
Astro



Buddy

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Buddy in action



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ACCRA: experimentation (1)

Evaluate the value of the robotics solutions

MAST Multidisciplinary assessment	ACCRA assessment domains in experimentation phase
<ul style="list-style-type: none">• Health problem and characteristics of the application• Safety• Clinical effectiveness• Patient perspective• Economic aspects• Organisational aspects• Socio-cultural, ethical and legal aspects	<ul style="list-style-type: none">• Characteristics of the users and the application• Technical aspects• Safety• Outcomes• User perspective• Economic and business aspects• Organisational aspects• Socio-cultural, ethical and legal aspects (ELSI)

The Erasmus logo, featuring a stylized, handwritten-style script of the word "Erasmus" in black.

ACCRA: experimentation (2)

- 2 X 4 months
- Interviews
- Questionnaires
- Data from robots
- Focusgroups



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ACCRA: sustainability analysis

Defining the potential market for the robotics solutions, and assessing the large scale impact of up scaling robotics solutions on the health system

- **Cross-border comparison**
- **Market analysis**
- **Scalibility scenarios**



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Challenges

- Ethical
- Resistance to robotics
- Technical boundaries
- Insurance



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Thank you for your attention

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