ECHORD++

The European Coordination Hub for Open Robotics Development

CLARC project

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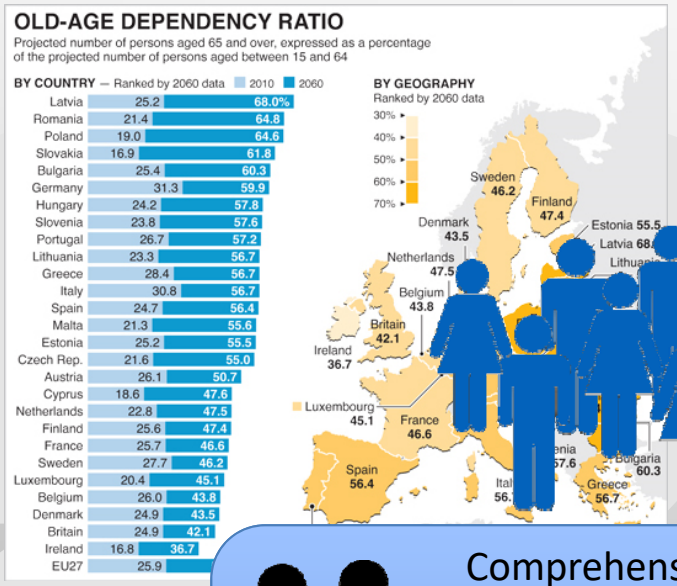
EUFO building, Luxembourgh / February 14

Background / motivation



The profile of aging is changing dramatically

loss of independence MUST NOT BE an inevitable consequence of aging

Comprehensive Geriatric Assessment (**CGA**)

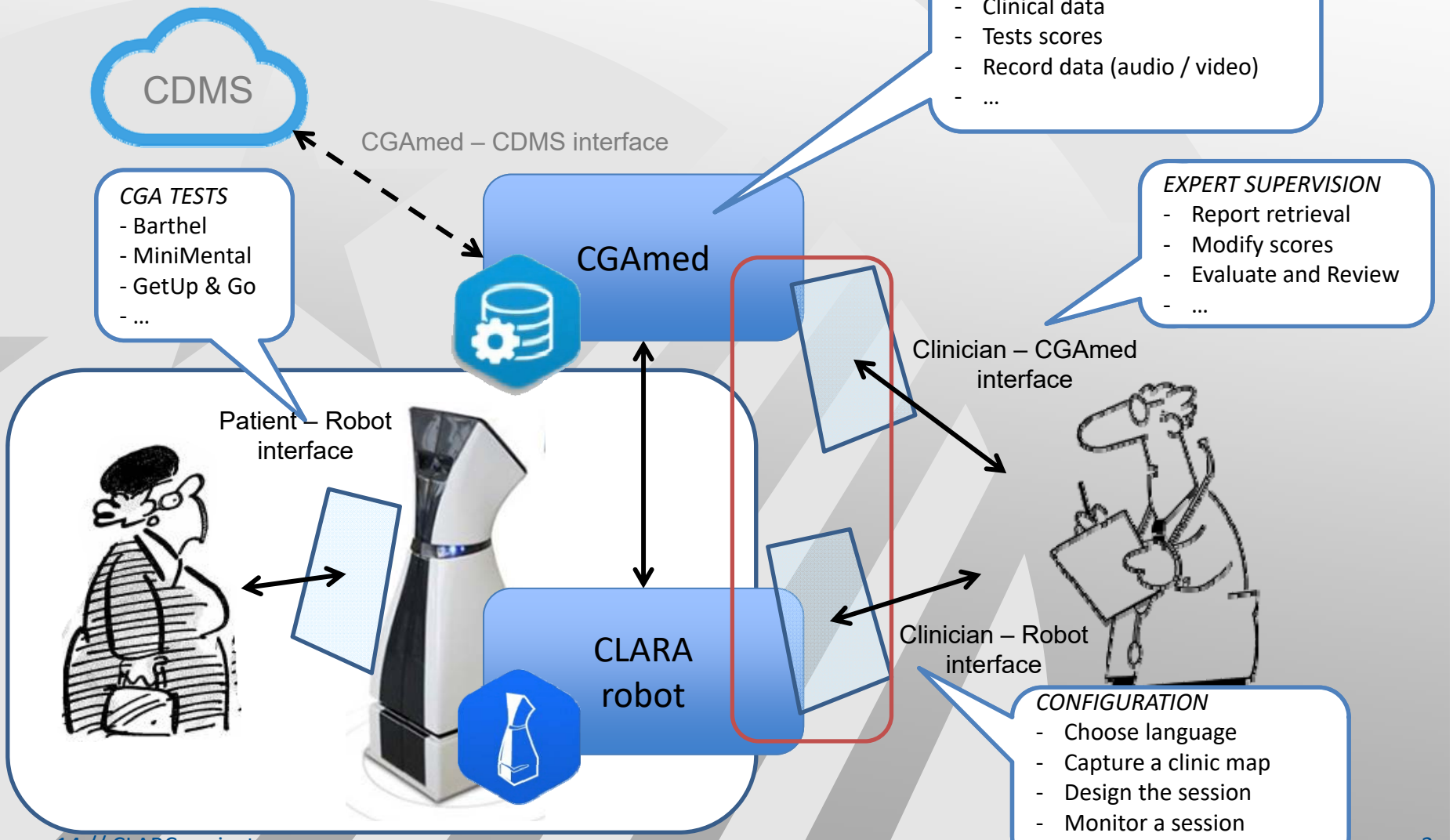
- ✓ Individualized
- ✓ Periodic
- ✓ Patients and relatives

- ✓ *Evidence-based interventions*
- ✓ *Individualized care plans*

Healthcare services has problems for providing such as attention to an increasing population → *why do not develop a tool for help them?*

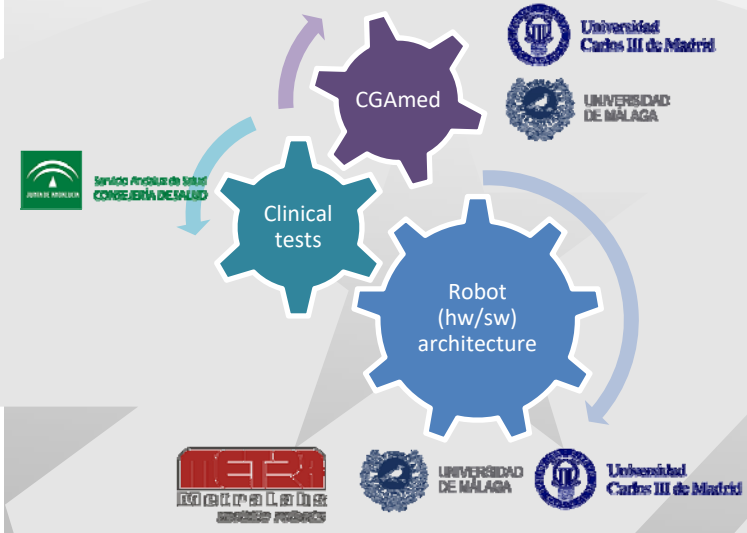
Technical progress

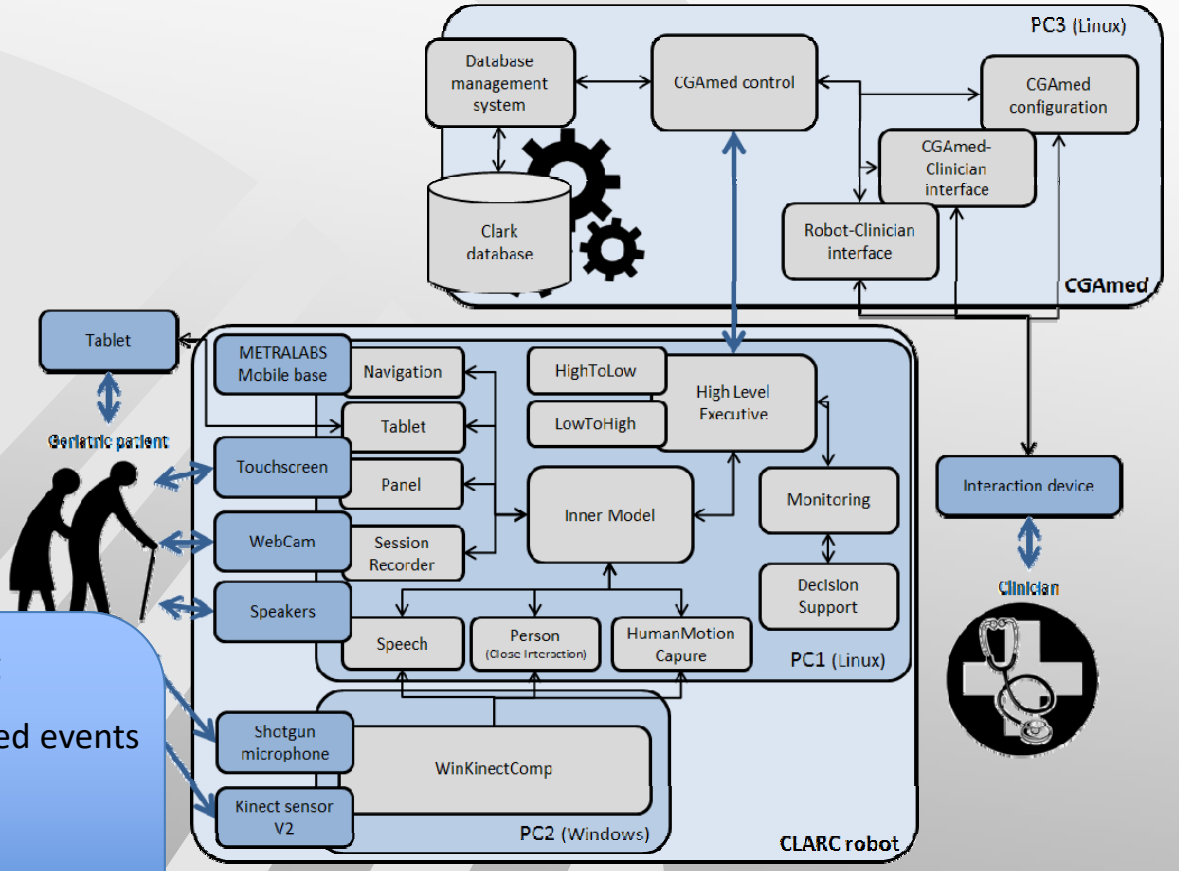
CLARC – Smart Clinic Assistant Robot for CGA



Technical progress

CLARC – Smart Clinic Assistant Robot for CGA





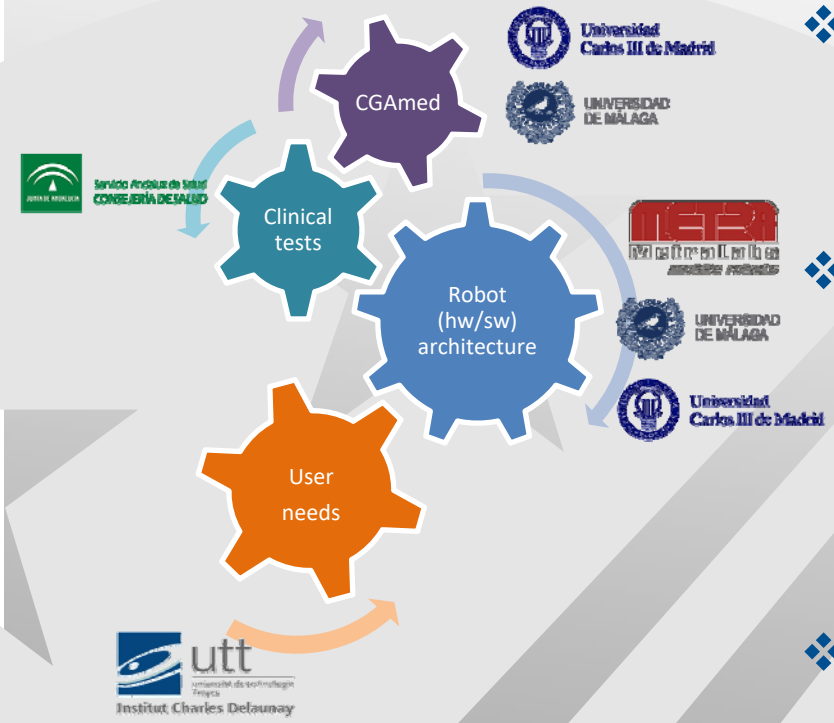
- ✓ Automatic monitoring and planning
- ✓ Autonomous response to unexpected events
- ✓ Mobility and autonomy
- ✓ Multi-language support
- ✓ Specialised interfaces
- ✓ Automatic scoring

End-user involvement?

- Acceptable by patients and relatives
- Usable by healthcare professionals

??

Technical progress

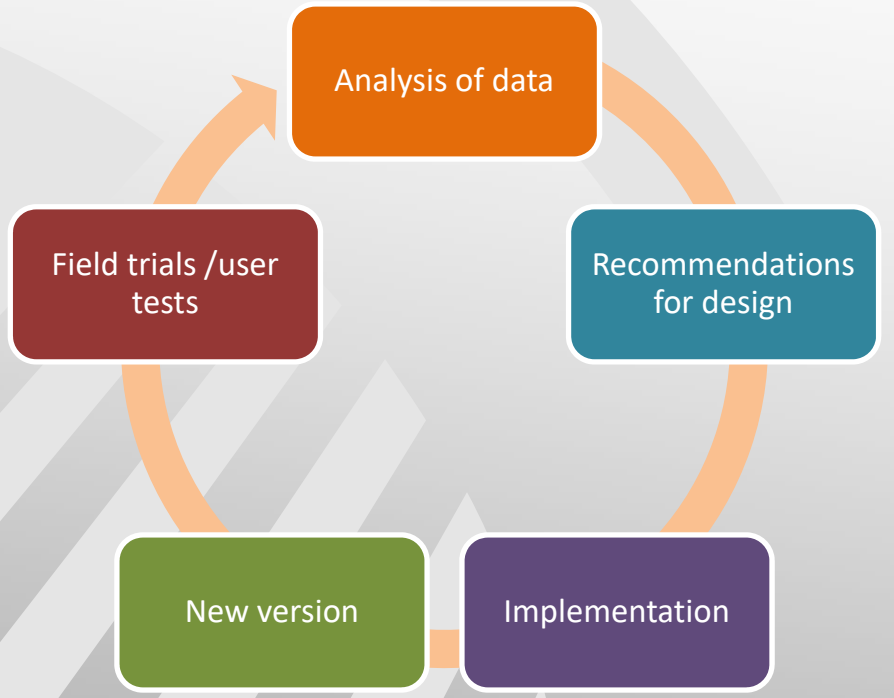


Participatory and user-centred Design Approach

- Users
  - Seniors (potential patients)
  - Health professionals
- Beginning of Phase 2: User requirements analysis
  - User tests (based on working prototype)
  - Participatory workshops
  - Interviews
- January – Consortium meeting – Data
  - 10 user tests – Barthel + Get Up & Go (French)
  - 3 user tests – Minimental (English)
    - 13 post-test interviews
  - 5 interviews of health professionals (geriatricians, physiotherapist, nurse, retirement home director)

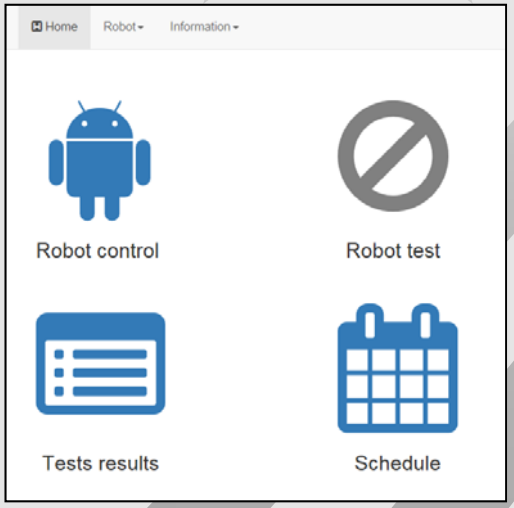
Technical progress

User analysis → Recommendations



- *Objective:* Translate to design ideas
  - ✓ Users' needs
    - what patients value – interaction with doctor
    - health professionals' practices and habits
  - ✓ Analysis of users' activity with the robot (difficulties in interacting)

Demonstrator/ prototype



Kinect sensor v2

Shotgun microphone

Touchscreen monitor

2 omnidirectional speakers

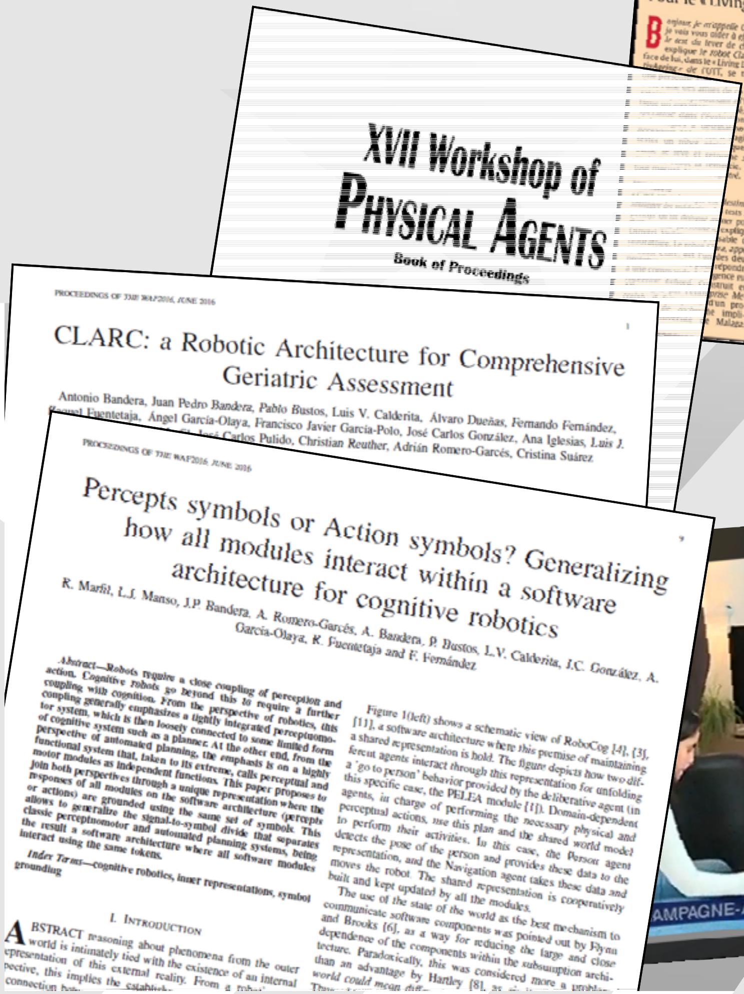
Barebone i7

Embedded PC with intel-i7 CPU and Wi-Fi

SCITOS G5 mobile base

- First results: hypothesis of use case confirmed
  - Acceptability of robot – seniors
    - ✓ feel at ease doing the test
    - ✓ easy interaction
  - Usefulness for health professionals
    - ✓ Geriatrician: greater efficiency in follow-up
    - ✓ Nurse: more time for relational

Impact from participation in ECHORD++


XVII Workshop of Physical Agents
Book of Proceedings

PROCEEDINGS OF THE WAF2016, JUNE 2016

CLARC: a Robotic Architecture for Comprehensive Geriatric Assessment

Antonio Bandera, Juan Pedro Bandera, Pablo Bustos, Luis V. Calderita, Álvaro Dueñas, Fernando Fernández, Raquel Fuentetaja, Ángel García-Olaya, Francisco Javier García-Polo, José Carlos González, Ana Iglesias, Luis J. Manso, Rafael Marfil, José Carlos Pulido, Christian Reuther, Adrián Romero-Garcés, Cristina Suárez

PROCEEDINGS OF THE WAF2016, JUNE 2016

Percepts symbols or Action symbols? Generalizing how all modules interact within a software architecture for cognitive robotics

R. Marfil, L.J. Manso, J.P. Bandera, A. Romero-Garcés, A. Bandera, P. Bustos, L.V. Calderita, J.C. González, A. García-Olaya, R. Fuentetaja and F. Fernández

I. Introduction


UNIVERSITÉ DE TECHNOLOGIE DE TROYES

Robotique : « Bonjour, je m'appelle Clara »

Un robot destiné à assister les médecins en gériatrie est actuellement en test à l'UTT. Pour le « Living Lab ActivAgeing », le laboratoire de l'UTT, c'est une « fierté ».


L'ACTUALITÉ DANS L'AUBE 24H/24
TV TROYES ET AUBE

L'ACTU | SOCIÉTÉ | SPORT | ECONOMIE | CULTURE | LOISIRS

Home | Société | Living Lab de l'UTT : la gériatrie assistée par un robot

LIVING LAB DE L'UTT : LA GÉRIATRIE ASSISTÉE PAR UN ROBOT

Diffusion le 20/01/2017

Un robot qui assisterait les soignants pour une meilleure prise en charge des patients âgés à l'hôpital, c'est l'objet d'une réflexion et d'un développement au Living Lab de l'UTT. Des tests sont déjà menés en France pour développer cette innovation technologique, et le robot est actuellement à l'UTT pour la recherche. Ce vendredi matin, il était notamment question d'un atelier participatif, une immersion pour 16 séniors.

Thank you.