



The European Coordination Hub for Open Robotics Development

E++ Review Meeting Period 3

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EUFO building, Luxembourg / February 14



Servicio Andaluz de Salud
CONSEJERÍA DE SALUD



université de technologie
Troyes
Institut Charles Delaunay



Universidad
Carlos III de Madrid



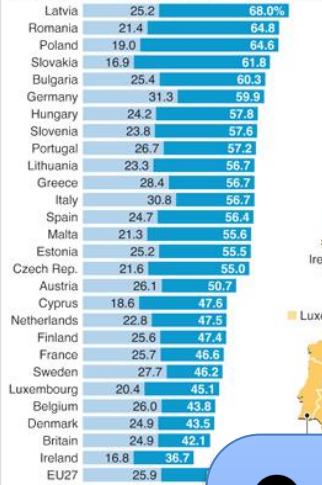
UNIVERSIDAD
DE MÁLAGA

Background / motivation

OLD-AGE DEPENDENCY RATIO

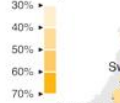
Projected number of persons aged 65 and over, expressed as a percentage of the projected number of persons aged between 15 and 64

BY COUNTRY — Ranked by 2060 data



BY GEOGRAPHY

Ranked by 2060 data



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

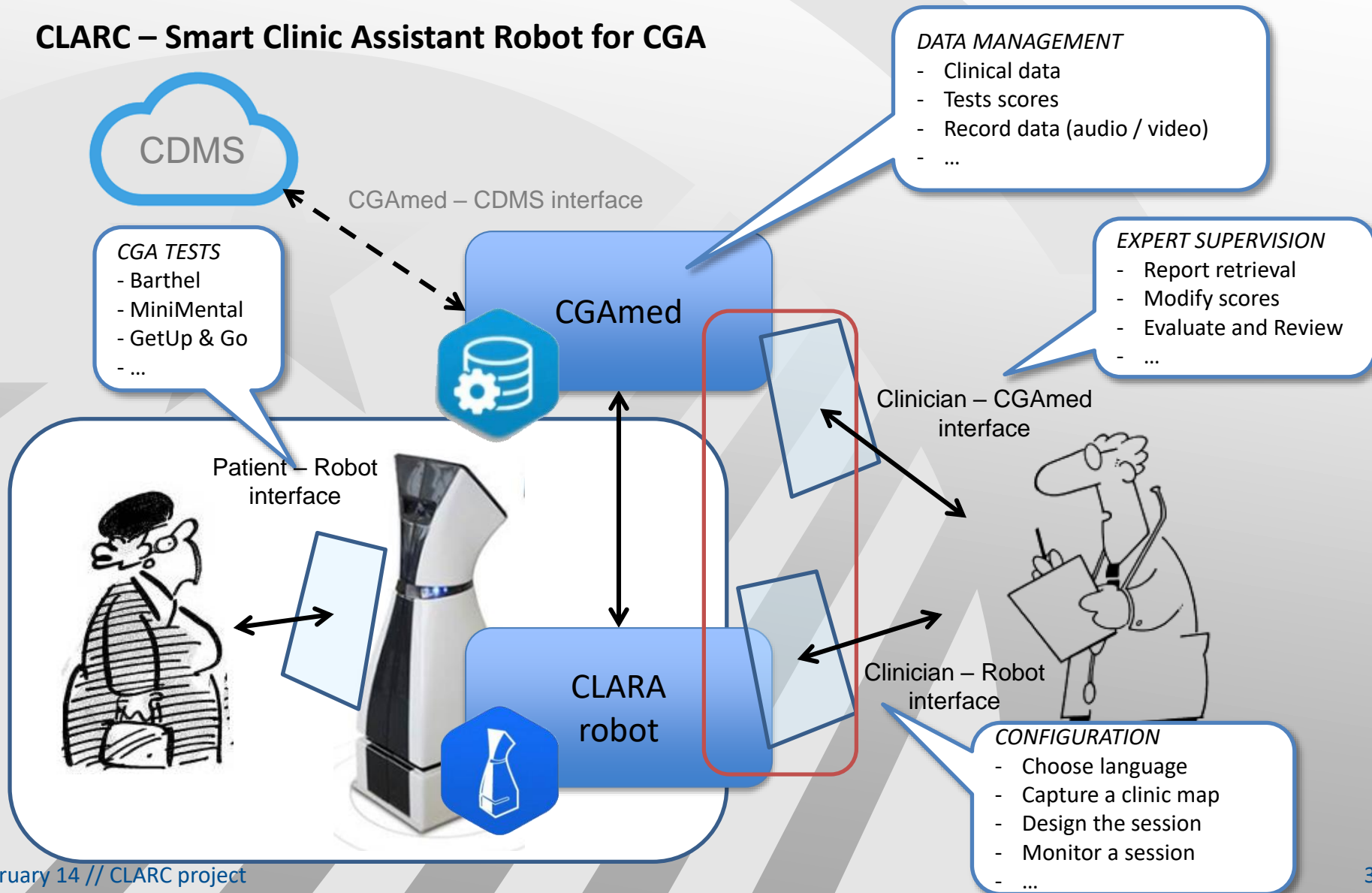
- ✓ Evidence-based interventions
- ✓ Individualized care plans



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

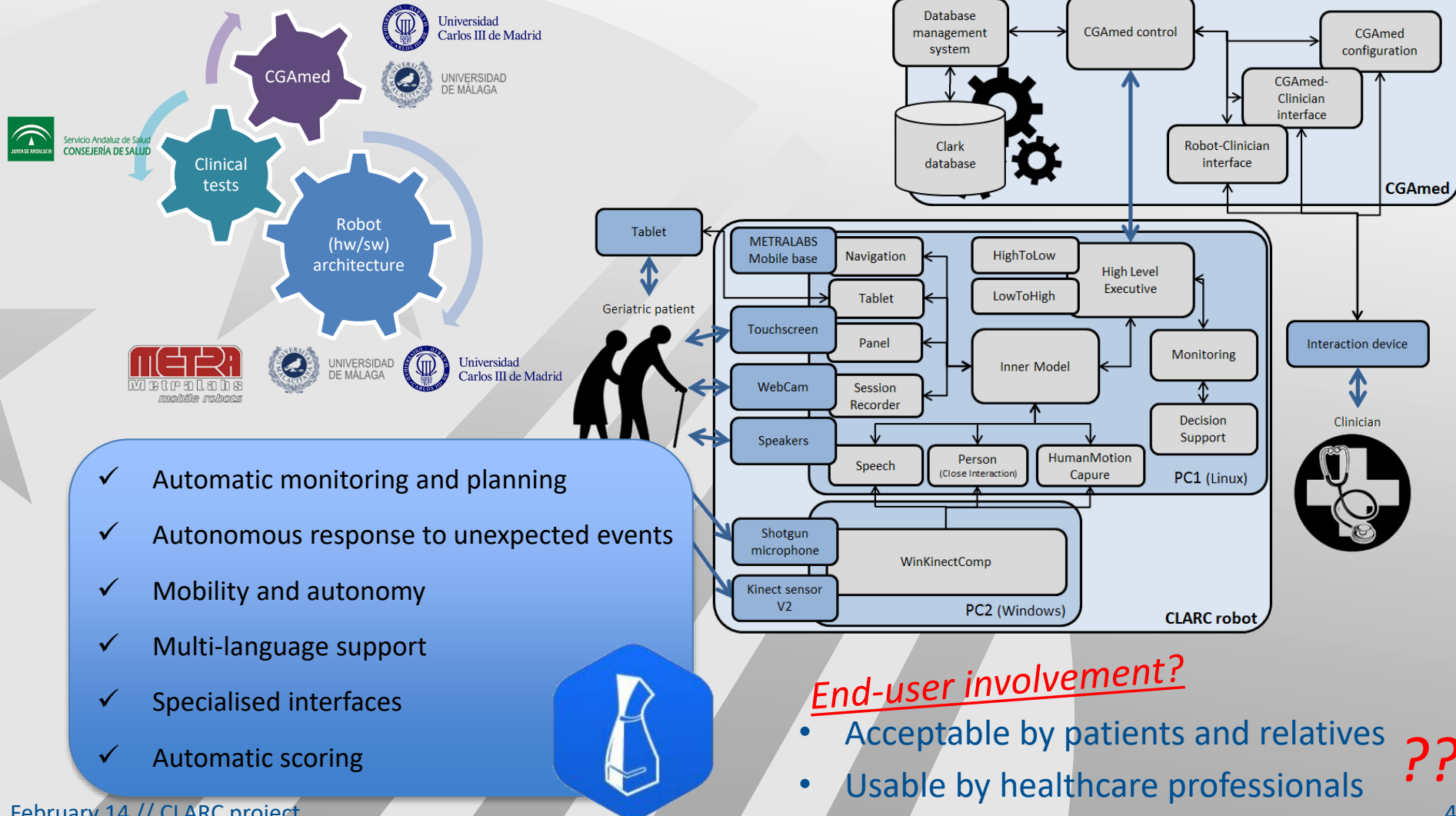
Technical progress

CLARC – Smart Clinic Assistant Robot for CGA



Technical progress

CLARC – Smart Clinic Assistant Robot for CGA



Technical progress

Participatory and user-centred Design Approach

❖ Users

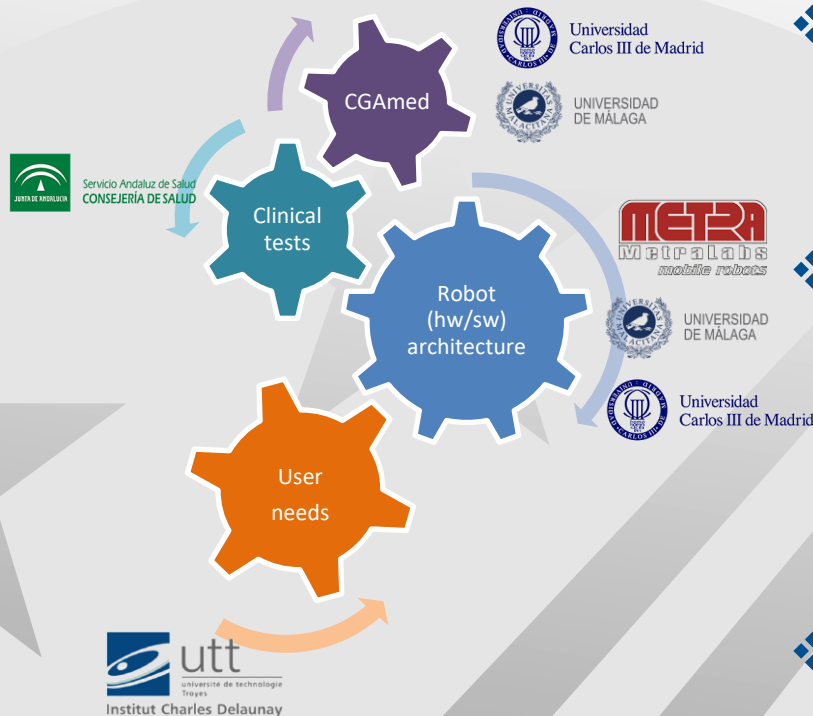
- Seniors (potential patients)
- Health professionals

❖ Beginning of Phase 2: User requirements analysis

- User tests (based on working prototype)
- Participatory workshops
- Interviews

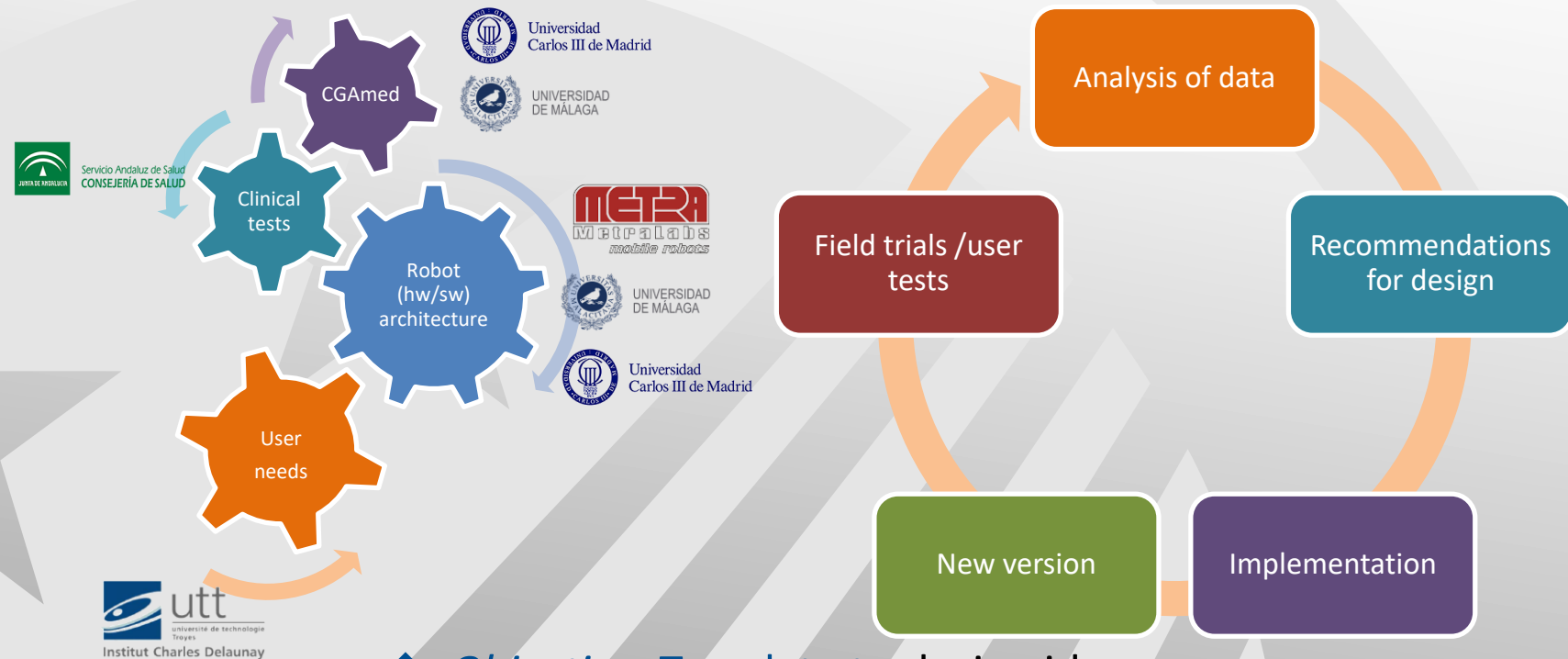
❖ January – Consortium meeting – Data

- 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



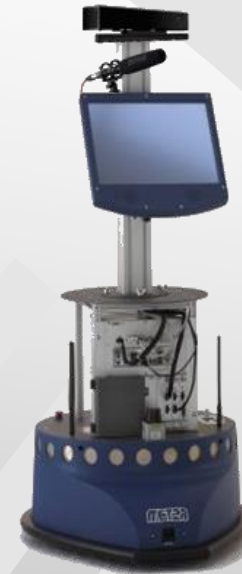
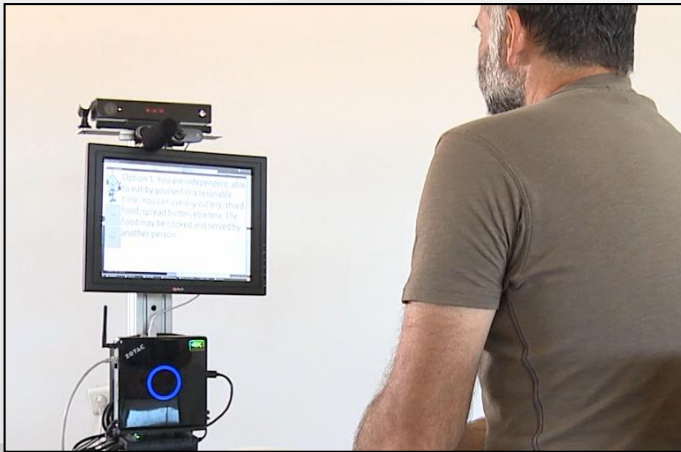
❖ Objective: Translate to design ideas

✓ 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

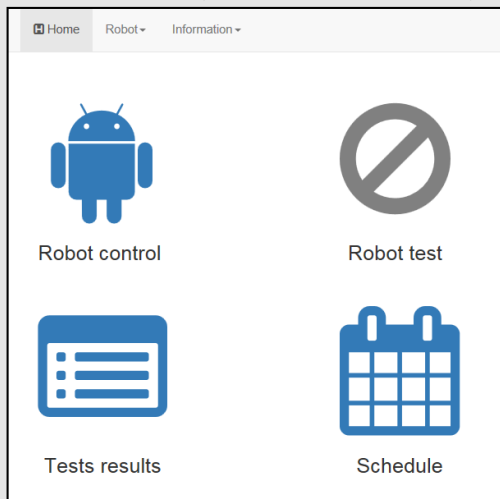
Touchscreen monitor

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

Book of Proceedings

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 seniors.

Thank you.

Questions?