

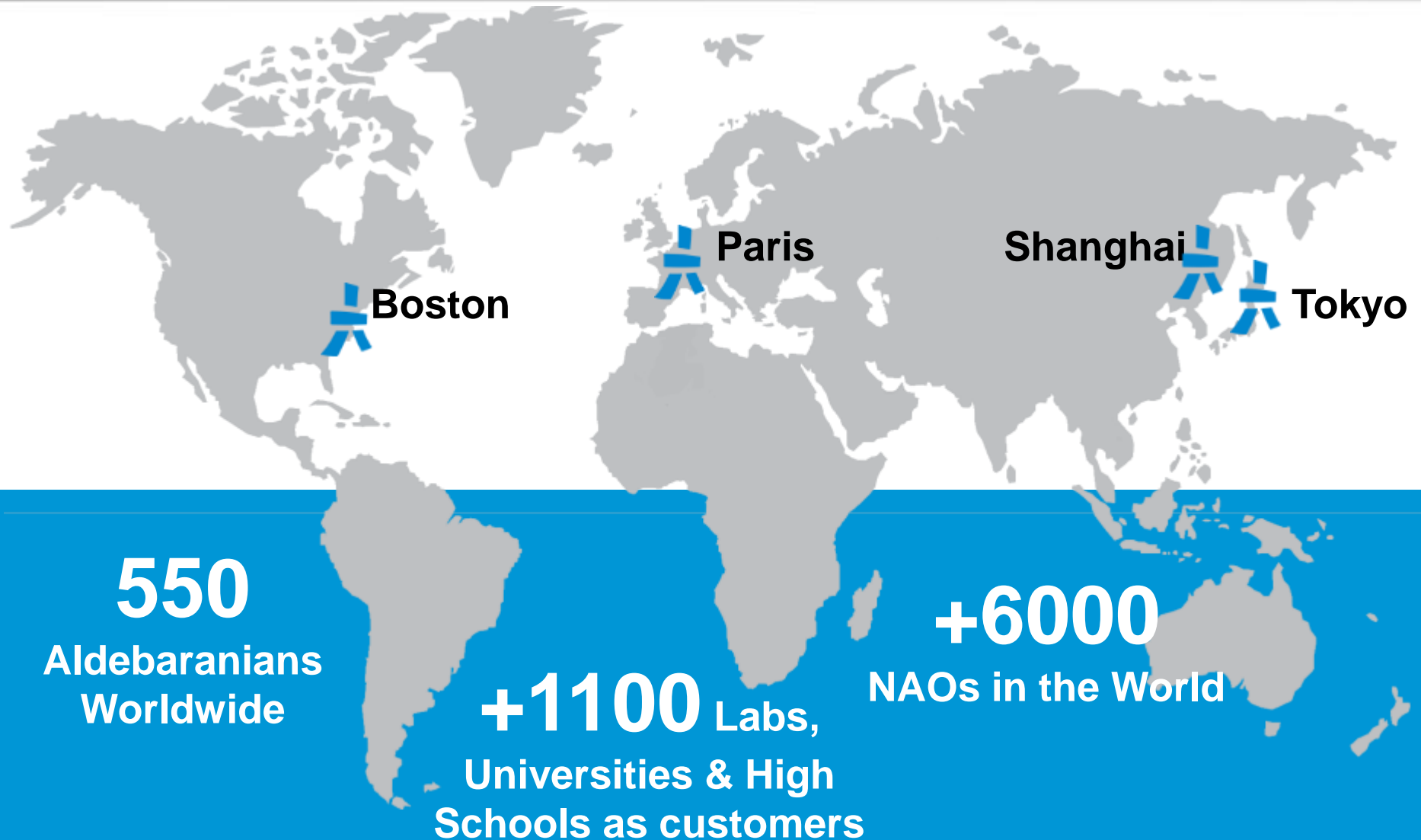


Societal Applications of Humanoid Robots

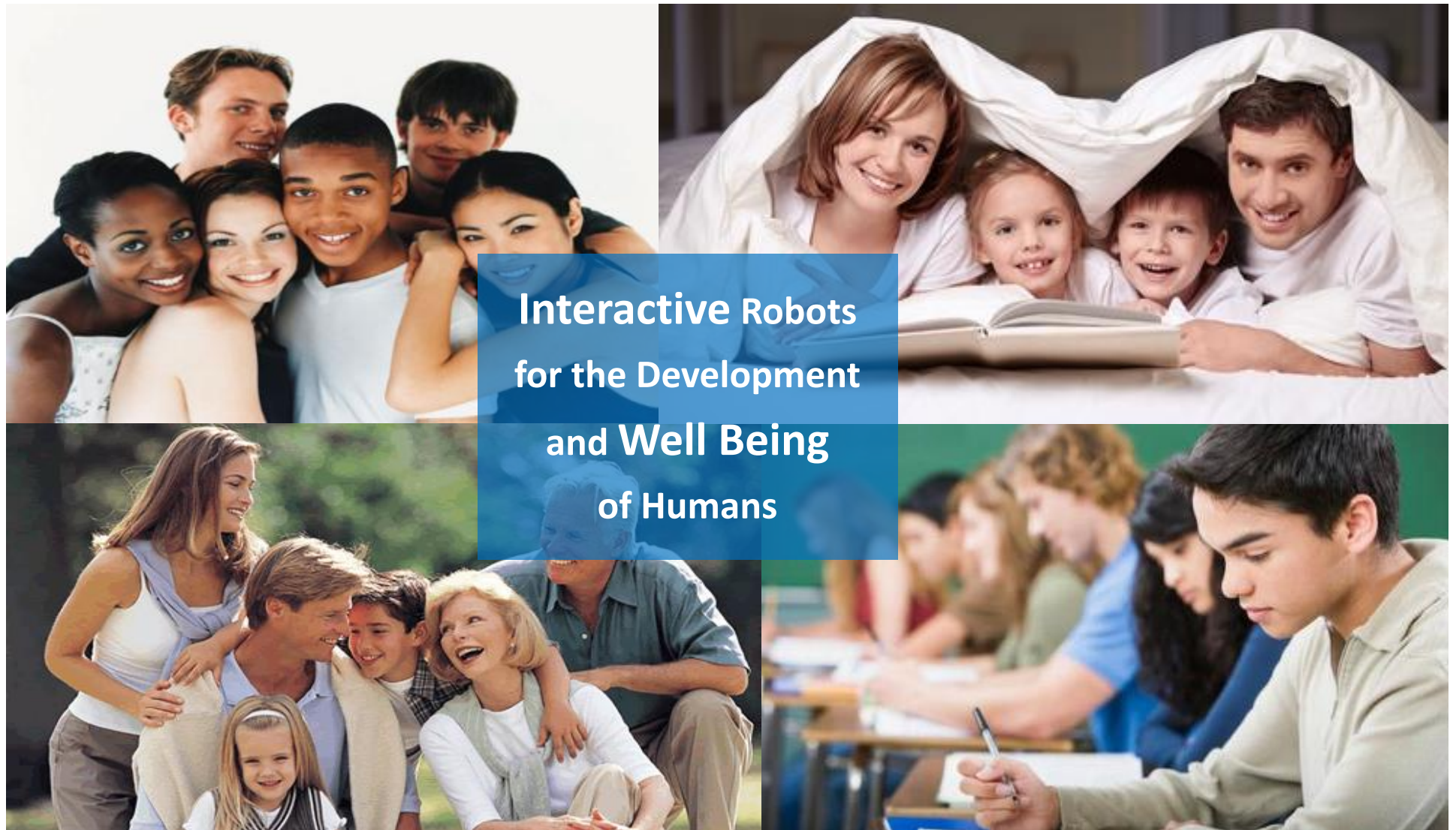
ERF 2014

Rovereto, March 2014

About Aldebaran Robotics



Our vision



**Interactive Robots
for the Development
and Well Being
of Humans**

A very simple application at the hospital

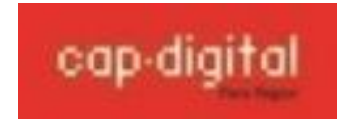


A companion for autistic children



Some words about Romeo

- **Romeo is the research platform of Aldebaran Robotics**
 - Technologies
 - Usage
- **French national projects labeled by the cluster Cap Digital**
- **Collaborative projects**
 - Romeo : 13 partners (January 2009 – September 2012)
 - Romeo 2 : 18 partners (December 2012 – December 2015)



BPI France

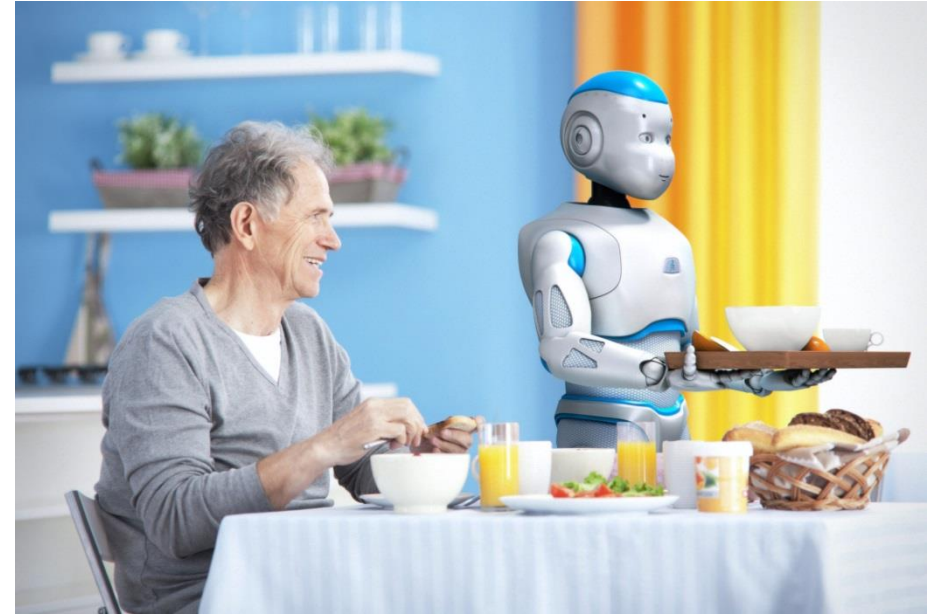


Aim: to design a human-size humanoid robot, a real personal assistant for independent living of elderly and disabled people



More applications will be possible

- **Physical Interaction**
 - With the objects in the environment
 - With people
- **Cognitive interaction**
 - More natural : eyes at the same level
 - More CPU for better sensing
- **But**
 - More intrusive



First steps with Nao



PROJET **R6ME6**

● Objectives

- Get a first feedback of elderly people
- Validate and enhance the envisaged scenarios
- Getting a corpus for future research on interaction

● Protocol

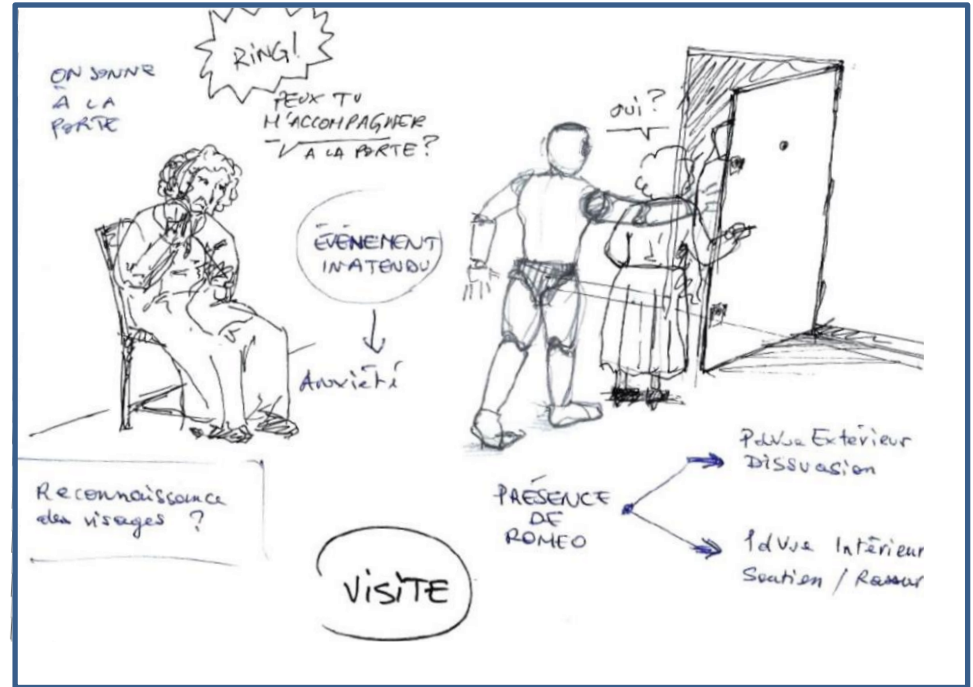
- 27 volunteer persons from Retirement Houses
- 20min interaction with Nao
- Wizard of Oz
- Four scenarios
 - Greetings
 - Reminder of events (medicine)
 - Social interaction : call a relative
 - Cognitive stimulation : game about songs
- Questionnaire

● Results to be published soon





Introducing people to each other



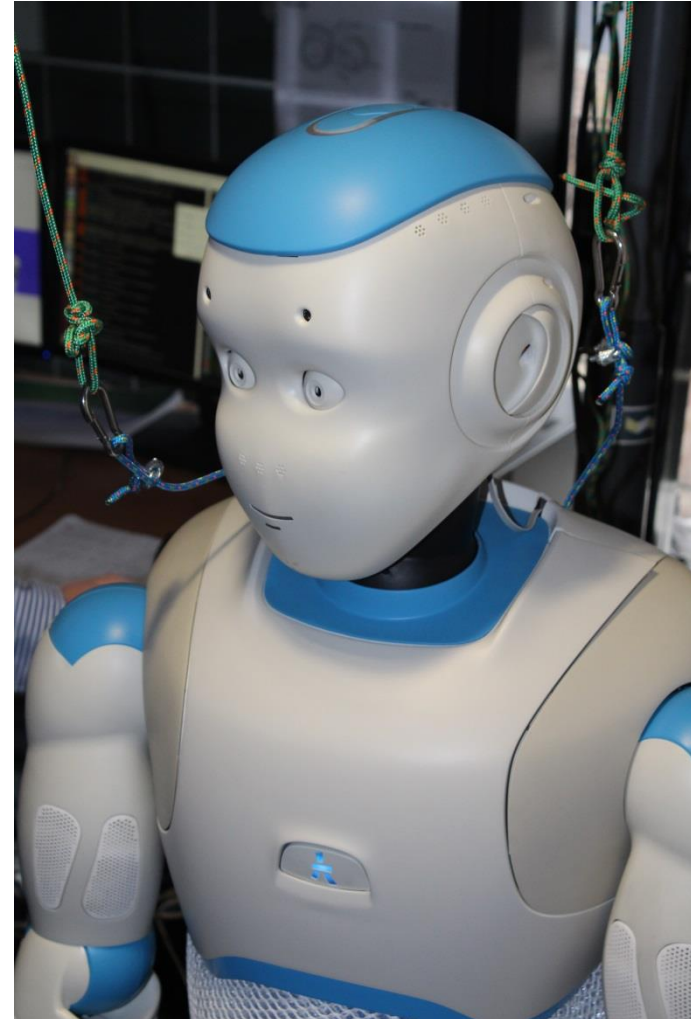
Welcoming visitors

First social interaction with Romeo



A new feature : mobile eyes

- **Robotic functions**
 - Focus on objects for stereo-vision
 - Gaze stabilization while walking
- **Expressivity for social interaction**
 - Focusing
 - Gaze Aversion



● Positive

- It is cuter than a wheelchair
- I like the look : it is a little pal
- Fun, I was not expecting that
- I don't need to have always my phone with me anymore
- I was expecting it taller

● Negative

- Fun but so what ?
- It is not enough intelligent
- It does not have enough information

● Recommendations

- It should not decide for me
- It should be reliable
- It should be taller
- I don't want it is taller than me in my chair
- I don't want it to do what I can do or I will become lazy

