



Implementation and integration of advanced Robotic systems and intelligent Environments in real scenarios for the ageing population



Large-scale integrating project (IP), FP7-ICT-2011-7

PROJECT COORDINATOR  
Paolo Dario

Cooperative robots taking care of elderly from the street to the home

# Newsletter

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volume

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## News

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## Upcoming Robot-Era events

### 1<sup>st</sup> Robot-Era Summer School, June 2013

The 1<sup>st</sup> Robot-Era Summer School will take place on June 2013. This event is part of a series of two Summer Schools that Robot-Era will organize during the project lifetime. A programme with detailed information will be soon available in the [website](#).

### 1<sup>st</sup> experimental loop, May 2013

In May 2013, the Ambient Intelligence infrastructure will be implemented and installed in the experimental sites. During this first loop the experiments will be carried out only in the living laboratories (Domocasa Lab in Italy and PEIS-Home in Örebro).

## Editorial

Dear reader,  
we are glad to present the first Robot-Era newsletter.

Robot-Era is a project, funded by the European Commission, with the ambition to significantly enhance the complexity and acceptability of current robotic services to a new level of service and performance for helping seniors in daily life.

The mission of Robot-Era can be summarized as follows:  
**Cooperative robots taking care of elderly from the street to the home!**

The ambition of Robot-Era is to develop enhanced and high-quality services for aging well, provided by the cooperation of different robots with the support of an ambient intelligence infrastructure that working together will offer elderly users a unique set of useful services in these environmental contexts: house, condominium and urban area.

The strength of Robot-Era consists of these points:

- *extended previous knowledge* in the field of service and social robotics systems;
- *highly interdisciplinary approach* based on cognitive-inspired architectures for robot control, cognitive skills learning and integration, and human-robot interaction;
- unique test-beds in *real urban settings and effective living laboratories with real users*, with full support by local administration and citizens;
- deeply integrated approach fusing a *plurality of indoor and outdoor robots with ambient intelligence technology*.

To obtain these objectives several challenges will be dealt with, not only from scientific and technological points of view but also issues related to robot acceptability and usability, legal and insurance admissibility, market and business potentialities.

Follow Robot-Era by [signing up](#) for our newsletter!

**Prof. Paolo Dario, Robot-Era Project Coordinator**

## In the spotlight

### News from the world

#### European Innovation Partnership on Active and Healthy Ageing

In November, 2012, the six Action Groups presented their plans to tackle specific challenges in the field of Active and Healthy Ageing: adherence to treatment, falls prevention, frailty, integrated care, independent living and age friendly environments. >>>>

#### Digital Agenda: Commission and European industry commit to bigger and better robotics sector

The European Commission, industry and academia have agreed to launch a Public Private Partnership (PPP) in Robotics, to help Europe-based companies take a larger share of the €15.5 billion annual global robotics market. >>>>

#### Eurobarometer Survey: Public attitudes towards Robots

66% of EU citizens respondents states that the idea of a human-like robot helping out in the home corresponds well to the idea that they have of robots. >>>>

#### Older adults' preferences

The study showed that seniors prefer robotic help for household chores but not for personal needs (help getting dressed, bathing, etc.). >>>>

### Robot-Era at a glance

The activities of Robot-Era project started in January, 2012 and will be carried out until December, 2015.

The objective of the project is to develop, implement and demonstrate the general feasibility, scientific/technical effectiveness and social/legal plausibility and acceptability by end-users of a plurality of complete advanced robotic services, integrated in intelligent environments, which will actively work in real conditions and cooperate with real people and between them to favour independent living, improve the quality of life and the efficiency of care for elderly people.

Research in Robot-Era will make use of already available prototypes and robotic platforms, provided by the Robot-Era partners, and others purchased from European companies, which will be adapted and optimized for the Robot-Era services and for usability and acceptability by elderly people.

The project plans to use the robotic platforms in 3 different scenarios: indoor, condominium and outdoor.

The most important phase of Robot-Era is the implementation of two experimental trial loops in Peccioli (Italy) and Örebro (Sweden) where service robotics prototypes and products will be fully tested in the accomplishment of their intended tasks, in real scenarios, with real users and for a long period of time.



Kick-off meeting, Pontedera – Peccioli, Italy

## First twelve months results

After twelve months, the work of Robot-Era Consortium produced some interesting and encouraging preliminary results.

In particular, during this year, more than 160 potential users of Robot-Era services - elderly persons and caregivers coming from Italy, Germany and Sweden - were involved in focus groups and creative workshops to identify which robotic services Robot-Era should develop and which requirements Robot-Era robotic platforms should satisfy to be considered acceptable.



*Pictures of meetings involving elderly volunteers carried out in Italy (left) and Germany (center and right)*

On the base of these results, technical experts of the Consortium are designing a preliminary structure of the three robots, the environmental sensor network and the Ambient Intelligence strategies for the management of services and events.

Furthermore, the Consortium is setting up two test sites of Robot-Era services, Peccioli (Italy) and Ängen (Sweden), in preparation of the first loop of experiments that will be evaluated during 2013.



*Pictures of Robot-Era test sites: DomoCasa living lab in Peccioli, Italy (left) and PEIS-Home lab in Ängen, Sweden (right)*

### Robot-Era publications

#### Implementation of 3D services for "Ageing well" applications: Robot-Era project

Proceedings of the **Forum foritala2012**, October 17 - 19, 2012, Parma, Italy

#### Robot-Era project (FP7-ICT-2011.5.4): from the end-user's perspective to robotics. Preliminary findings

Proceedings of the **AAL - Ambient Assisted Living Forum 2012**, September 24 - 27, Eindhoven, The Netherlands

#### "Multimodal Robot Feedback for Eldercare," Robot Feedback in Human-Robot Interaction: How to Make a Robot "Readable" for a Human Interaction Partner

Workshop at the **IEEE International Symposium on Robots and Human Interactive Communications (RO-MAN)**, September 9, 2012, Paris, France

Find more information on these and other issues in our website:

[www.robot-era.eu](http://www.robot-era.eu)

# ROBOT-ERA

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## External events

March 3-6, 2013

**[HRI 2013](#) - 8th International conference on human-robot interaction**

March 19-21, 2013

**[euRobotics Forum 2013](#) - European Robotics Forum**

May 6 -10, 2013

**[ICRA 2013](#) - IEEE International Conference on Robotics and Automation**

May 22-24 , 2013

**[ISAmI 2013](#) - 4th International Symposium on Ambient Intelligence**

June 23-27, 2013

**[IAGG 2013](#) - "Digital Ageing: New Horizon for Health Care and Active Aging"**

June 23-27, 2013

**[ICORR 2013](#) - 18th International Conference on Rehabilitation Robotics**



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FP7 - ICT - Challenge 5: ICT for Health, Ageing Well, Inclusion and Governance

## The Robot-Era Consortium

The development of the Robot-Era project is carried out by a multidisciplinary consortium, in which partners from different technological, economical, medical and humanist disciplines collaborate to design and implement social service models in a user and town centered design approach.

The Robot-Era consortium comprises 12 partners from 4 different European countries:



### More information

For more information, visit the *Public documents* section of the project website:

[www.robot-era.eu](http://www.robot-era.eu)

or contact the Project Coordinator, **Prof. Paolo Dario**, and the Project Manager, **Dr. Filippo Cavallo**, at SSSA:

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