ROBOT FLEETS FOR HIGHLY EFFECTIVE AGRICULTURE AND FORESTRY MANAGEMENT

Fact Sheet

<table>
<thead>
<tr>
<th>Project Information</th>
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<tbody>
<tr>
<td><strong>RHEA</strong></td>
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<tr>
<td>Grant agreement ID: 245986</td>
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<table>
<thead>
<tr>
<th>Funded under</th>
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<tr>
<td>FP7-NMP</td>
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<table>
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<tr>
<th>Overall budget</th>
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<tbody>
<tr>
<td>€ 8 892 394,80</td>
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<table>
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<tr>
<th>EU contribution</th>
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<tbody>
<tr>
<td>€ 6 599 286</td>
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<th>Coordinated by</th>
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<tbody>
<tr>
<td>AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS</td>
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<tr>
<td>Spain</td>
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Start date 1 August 2010  
End date 31 July 2014

This project is featured in...
Objective

In the last two decades, a precise management of agricultural land has been made possible due to the availability of new technologies, including global positioning systems (GPS), geographic information systems (GIS), sensors, automation of agricultural machinery, and high resolution image sensing. As a result, the concept of Precision Agriculture has emerged as the management strategy that uses information technologies to collect and process data from multiple sources in order to facilitate decisions associated with crop production. Moreover, the EU’s sixth environmental action programme addresses the need to encourage farmers to change their use of plant protection products’.

RHEA is focused on the design, development, and testing of a new generation of automatic and robotic systems for both chemical and physical –mechanical and thermal– effective weed management focused on both agriculture and forestry, and covering a large variety of European products including agriculture wide row crops (processing tomato, maize, strawberry, sunflower and cotton), close row crops (winter wheat and winter barley) and forestry woody perennials (walnut trees, almond trees, olive groves and multipurpose open woodland).

RHEA aims at diminishing the use of agricultural chemical inputs in a 75%, improving crop quality, health and safety for humans, and reducing production costs by means of sustainable crop management using a fleet of small, heterogeneous robots –ground and aerial– equipped with advanced sensors, enhanced end-effectors and improved decision control algorithms. RHEA can be considered as a cooperative robotic system, falling within an emerging area of research and technology with a large number of applications as reported by the FP6 Network of Excellence EURON, Special Interest Group on Cooperative Robotics, funded by the European Commission.

RHEA will be a unique opportunity to gather a very large number of multidisciplinary research groups with adequate funds to accomplish an authentic step forward in applying precision agriculture techniques in a massive way. This consortium joins a number of multidisciplinary, experienced researchers capable of improving individual scientific knowledge, but a large cooperation project is demanded to sum up the individual efforts in a holistic manner. The success of
RHEA could bring a new means of applying automatic systems to agriculture and forestry crops with an important impact in improving the economy and environment as well as in maintaining the sustainability of rural areas by launching new technological jobs.

**Fields of science**

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**Programme(s)**

**Topic(s)**

**Call for proposal**

FP7-NMP-2009-LARGE-3

**Funding Scheme**

**Coordinator**

AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS

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<th>Address</th>
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<tr>
<td>Calle Serrano 117 28006 Madrid Spain</td>
<td>Research Organisations</td>
<td>€ 1 398 455,05</td>
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**Website**

<table>
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<tr>
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**Administrative Contact**

Ana Maria De La Fuente (Ms.)

**Participants (14)**
<table>
<thead>
<tr>
<th>Organisation</th>
<th>Activity type</th>
<th>Address</th>
<th>Website</th>
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<tr>
<td>COGVIS SOFTWARE UND CONSULTING GMBH</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
<td>Wiedner Hauptstrasse 17 3 A 1040 Wien</td>
<td></td>
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<tr>
<td>FTW FORSCHUNGSZENTRUM TELEKOMMUNIKATION WIEN GMBH</td>
<td>Research Organisations</td>
<td>Donau City Strasse 1/3 1220 Wien</td>
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<tr>
<td>CYBERBOTICS SARL</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
<td>Epfl Innovation Park, Building C 1015 Lausanne</td>
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<tr>
<td>UNIVERSITA DI PISA</td>
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EU contribution
€ 352 098,20

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Andrea Peruzzi (Prof.)

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Tropical S.A.

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George Kaplanis (Mr.)

SOLUCIONES AGRICOLAS DE PRECISION S.L.

Spain
EU contribution
€ 372 363,75

Address

Activity type
Higher or Secondary Education Establishments
Contact the organisation

Administrative Contact

Administrative Contact
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<tr>
<td>UNIVERSIDAD POLITECNICA DE MADRID</td>
<td>Calle Ramiro De Maeztu 7 Edificio Rectorado 28040 Madrid</td>
<td>€ 545 939,70</td>
<td>Higher or Secondary Education Establishments</td>
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<tr>
<td>AIRROBOT GMBH &amp; CO KG</td>
<td>Werler Strasse 4 59755 Arnsberg</td>
<td>€ 425 100</td>
<td>Private for-profit entities (excluding Higher or Secondary Education Establishments)</td>
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<td>UNIVERSITA DEGLI STUDI DI FIRENZE</td>
<td>Piazza San Marco 4 50121 Florence</td>
<td>€ 257 228</td>
<td>Higher or Secondary Education Establishments</td>
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INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES
POUR L'ENVIRONNEMENT ET L'AGRICULTURE
France
EU contribution
€ 360 001
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C.M. SRL
Italy
EU contribution
€ 244 761

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Activity type
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(excluding Higher or Secondary Education Establishments)

Administrative Contact
Nicola Tomatis (Dr.)

Administrative Contact
Gennaro Petillo (Mr.)

Last update: 1 August 2019
Record number: 95055

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