VINEyardROBOT

Fact Sheet

Project Information

VINEROBOT

Grant agreement ID: 610953

Project website

Status
Closed project

Start date
1 December 2013

End date
31 May 2017

Funded under
FP7-ICT

Overall budget
€ 2 714 078

EU contribution
€ 2 090 000

Coordinated by
UNIVERSIDAD DE LA RIOJA
Spain

This project is featured in...

RESULTS PACK
Precision Farming: Sowing the seeds of a new agricultural revolution

23 November 2018

Project description

Robotics use cases and Accompanying measures
The aim of this project is the design, development, and deployment of a novel use-case agricultural robot under the scope of Unmanned Ground Vehicles (UGV), and equipped with several non-invasive sensing technologies to monitor: 1) of grape yield, 2) vegetative growth, 3) Water stress and 4) Grape composition in order to optimize the vineyard management and improve grape composition and wine quality. The use of UGVs to monitor vineyard physiological parameters and grape composition has several advantages over simple hand-held devices for manual sampling and over UAV. UGVs may provide key information regarding vineyard physiology and water stress, grape composition, and pests and diseases’ incidence much faster than manual solutions and at higher resolution, in a more flexible way, and lower cost than aerial scouting carried out by drones or planes.

The scope covers the integral monitoring of vineyards, over the entire season, by placing a ground robot along the vineyards (endowed with artificial intelligence and machine learning techniques). The final users will receive updated in mobile application (app).

The proposed use-case agricultural robots (where key proximal sensing technologies will be implemented) will allow revolutionary and conclusive decision making to optimize vineyard management and to drive agronomical fundamental decisions according to grape yield estimation, plant growth monitoring, water status, and berry composition assessment. UGV proposed will incorporate an integrated system that includes machine vision, thermography and fluorescence-based sensors. Canopy images and data acquisition processes will be executed in real time through customized algorithms to compose specific production maps.

Field of science
/agricultural sciences/agriculture, forestry, and fisheries/agriculture/viticulture
/natural sciences/computer and information sciences/artificial intelligence
/natural sciences/computer and information sciences/artificial intelligence/machine learning

Programme(s)

Topic(s)

Call for proposal
FP7-ICT-2013-10

Funding Scheme
Coordinator

UNIVERSIDAD DE LA RIOJA

Address
Avenida De La Paz 93
26006 La Rioja
Spain

Activity type
Higher or Secondary Education Establishments

EU contribution
€ 502 825

Administrative Contact
Marta De Jaime Ruiz de Galarreta (Mrs.)

Participants (8)

Forschungsanstalt Geisenheim

Germany

EU contribution
€ 151 399

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Activity type
Research Organisations

Administrative Contact
Manfred Stoll (Dr.)

AVANZARE INNOVACION TECNOLOGICA SL

Spain

EU contribution
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Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Administrative Contact
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EU contribution
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71000 Macon
Website
Administrative Contact
JEAN-LUC AYRAL (Dr.)
<table>
<thead>
<tr>
<th>Organisation Name</th>
<th>Country</th>
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<td>SIVIS SRL</td>
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<td>€ 200 605</td>
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<td>Domaine De Gueyze La Tuque 47130 Bruch</td>
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Contact the organisation

Administrative Contact

Damien CHARBONNIER (Mr.)

Last update: 7 August 2017
Record number: 111031

Permalink: https://cordis.europa.eu/project/id/610953/

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