



AUTONOMOUS CLOUD-COMPUTING VINEYARD ROBOT



Title	AUTONOMOUS CLOUD-COMPUTING VINEYARD ROBOT
Title (native language)	
Category	<ul style="list-style-type: none"> • Recording or mapping technology • Robot or smart machine
Short summary for practitioners (Practice abstract) in English)	VINBOT is an all-terrain autonomous mobile robot with a set of sensors capable of Capturing and analysing vineyard images and 3D data by means of cloud computing applications, to determine the yield of vineyards and to share information with the winegrowers. VINBOT responds to a need to boost the quality of European wines by implementing precision viticulture (PV) to estimate the yield (amount of fruit per square metre of vine area: kg/m ²).
Short summary for practitioners	
Website	http://cordis.europa.eu/project/rcn/111459_it.html
Audiovisual material	
Links to other websites	
Additional comments	
Keywords	Farming equipment and machinery Soil management / functionality
Additional keywords	Precision Viticulture, Yield Management, Wine quality, Sensory System
Geographical location (NUTS)	ES
Other geographical location	
Cropping systems	Vineyards
Field operations	Pesticide application Crop protection Harvesting
SFT users	Farmer Buyer
Education level of users	All
Farm size (ha)	50-100 100-200 200-500 >500

Project info

Project name	VNBOT: AUTONOMOUS CLOUD-COMPUTING VINEYARD ROBOT TO OPTIMISE YIELD MANAGEMENT AND WINE QUALITY
Project coordinator	ATEKNEA SOLUTIONS CATALONIA, SA (ES)
Project partners	ORGOVANYI GAZDASZOVETKEZET SZOVETKET ASSIST SOFTWARE SRL BODEGAS FAMILIARES DE RIOJA PROVIR Instituto Superior de Agronomia COOPERATIVA AGRICOLA DE GRANJA CRL CANTINE D'ALFONSO DEL SORDO SRL ROBOTNIK AUTOMATION SLL AGRI-CIENCIA CONSULTORES DE ENGENHARIA LDA
Project period	2014 - 2017
Project status	ongoing
Objective of the project (native language)	VNBOT is an all-terrain autonomous mobile robot with a set of sensors capable of Capturing and analysing vineyard images and 3D data by means of cloud computing applications, to determine the yield of vineyards and to share information with the winegrowers. The objective of VNBOT to increase the quality of European wines by implementing precision viticulture (PV) to estimate the yield (amount of fruit per square metre of vine area: kg/m ²).
Objective of the project (in English)	VNBOT is an all-terrain autonomous mobile robot with a set of sensors capable of Capturing and analysing vineyard images and 3D data by means of cloud computing applications, to determine the yield of vineyards and to share information with the winegrowers. The objective of VNBOT to increase the quality of European wines by implementing precision viticulture (PV) to estimate the yield (amount of fruit per square metre of vine area: kg/m ²).

Effects of this SFT

Productivity (crop yield per ha)	Large increase
Quality of product	Some increase
Revenue profit farm income	Large increase
Soil biodiversity	No effect
Biodiversity (other than soil)	No effect
Input costs	No effect
Variable costs	Some decrease
Post-harvest crop wastage	Some decrease
Energy use	Some decrease
CH ₄ (methane) emission	No effect
CO ₂ (carbon dioxide) emission	No effect
N ₂ O (nitrous oxide) emission	No effect
NH ₃ (ammonia) emission	No effect
NO ₃ (nitrate) leaching	No effect
Fertilizer use	Some decrease
Pesticide use	Some decrease
Irrigation water use	No effect
Labor time	No effect
Stress or fatigue for farmer	No effect
Amount of heavy physical labour	No effect
Number and/or severity of personal injury accidents	No effect
Number and/or severity of accidents resulting in spills property damage incorrect application of fertiliser/pesticides etc.	No effect
Pesticide residue on product	No effect
Weed pressure	No effect
Pest pressure (insects etc.)	No effect
Disease pressure (bacterial fungal viral etc.)	Some decrease

Information related to how easy it is to start using the SFT

This SFT replaces a tool or technology that is currently used. The SFT is better than the current tool	strongly agree
The SFT can be used without making major changes to the existing system	no opinion
The SFT does not require significant learning before the farmer can use it	no opinion
The SFT can be used in other useful ways than intended by the inventor	disagree
The SFT has effects that can be directly observed by the farmer	agree

Using the SFT requires a large time investment by farmer	disagree
The SFT produces information that can be interpreted directly	strongly agree

[View this technology on the Smart-AKIS platform](#)

SMART AKIS PARTNERS:



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