# THE POWERFUL PRECISION VITICULTURE TOOL TO BREAK TRADITIONAL YIELD ESTIMATION IN VINEYARDS.

**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

**Wine is more than a beverage, is part of a culture that began to originate in the Neolithic. It was during the time of the Egyptian, Greek and Roman civilizations when wine acquired an outstanding importance, even to worship the God of the vineyards (Dionysus or Bacchus). Christianity greatly contributed to its expansion, being monasteries major centre of wine production during the Middle Ages. Currently, only in the European Union there are 1.6 million vineyards which produce about 175 million hectolitres annually.**

**To satisfy all kind of winegrowers and suit any palate, VINBOT arises. It is an all-terrain autonomous mobile robot equipped with a set of sensors capable of capturing and analyzing vineyard images and 3D data by means of cloud computing applications. This Precision Viticulture tool will allow winegrowers estimate the yield in an accurate way and, therefore, manage the canopy optimally and harvest areas according to the ripeness of the grape. This will lead to a high control of wines' quantity and quality.**

### Will help winegrowers perform three essential yield management techniques:

Defoliation

Fruit removal

Sequential harvesting by grapes ripeness by estimating the yield three times a year (spring, summer and véraison).

### Will assess vineyards features by means of:

Machine vision monitoring of main parameters hence allowing winegrowers take any needed corrective action.

### Will be able to assess:

Shoot-tip stress

Excessive water supply after flowering

Moderate/ severe water stress

Heat stress

Veráison

Canopy colour

Canopy density

Berry and cluster shape and size

Diseases and nutrient deficiencies

All these features are related to parameters as tendrils, colour, leaf angle or gaps which will be monitored by machine vision technology integrated into VINBOT.

Despite VINBOT's technological complexity which integrates robotics, computer vision and cloud-based applications, it will provide growers with easy-to-understand online vigour and yield maps of their vineyards, which will allow optimal management and a significant improvement of their wines' quality result of a process from grapes with the same ripeness state.

**Winegrowers will improve the organisation of the production and marketing of their wines by a better choice of the grapes to blend for each targeted wine quality segment which will increase their revenues.**

## A POWERFUL PRECISION VITICULTURE TOOL TO BREAK TRADITIONAL YIELD ESTIMATION IN VINEYARDS

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- 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/m2).
- Wineries and wine growers will be able to make accurate yield predictions to organise the production and marketing their wines, coordinating the mixing of grapes of homogeneous quality to efficiently market a range of wines by quality and price.

**www.vinbot.eu**

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