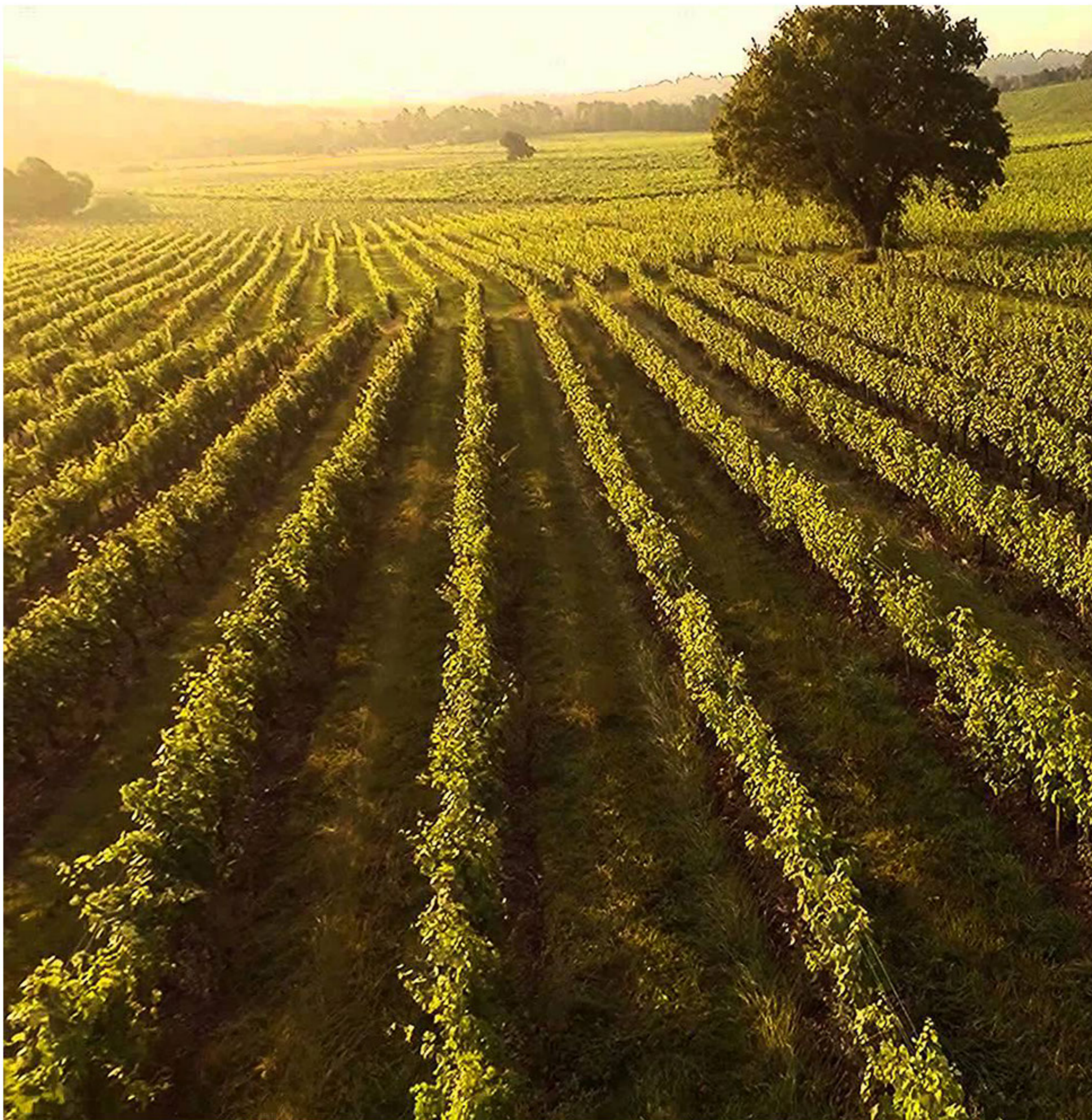# VITIPORTAL

PRECISION VITICULTURE SYSTEM

PRECISE VITICULTURE

Drones can provide winegrowers with new types of detailed views. Seeing a vineyard from the air can reveal patterns that expose soil variations, irrigation problems, infestations, weak spots and much more. Furthermore, a drone can survey a vineyard every week or every day. This type of imagery can show growth stages, changes in the crop or provide yield estimation for better vineyard management.

Our cameras can take multispectral images, capturing data from the infrared as well as the visual spectrum, which can be combined to create a view of the crop that highlights differences between healthy and distressed plants in a way that can't be seen with the naked eye.

Areial imagery of a vineyard, allows a winegrower to perform treatment directly in problematic section. Quite often boundaries of these sections are not easily seen from the ground and as the multispectral image can detect plant stress before the human eye - preventative treatment can be applied, saving money and increasing yield.

YIELD   LAI   CAB   NDVI

MATURITY MAP

HARVESTING MAP

FERTILIZATION MAP

LAI

CAB

NDVI
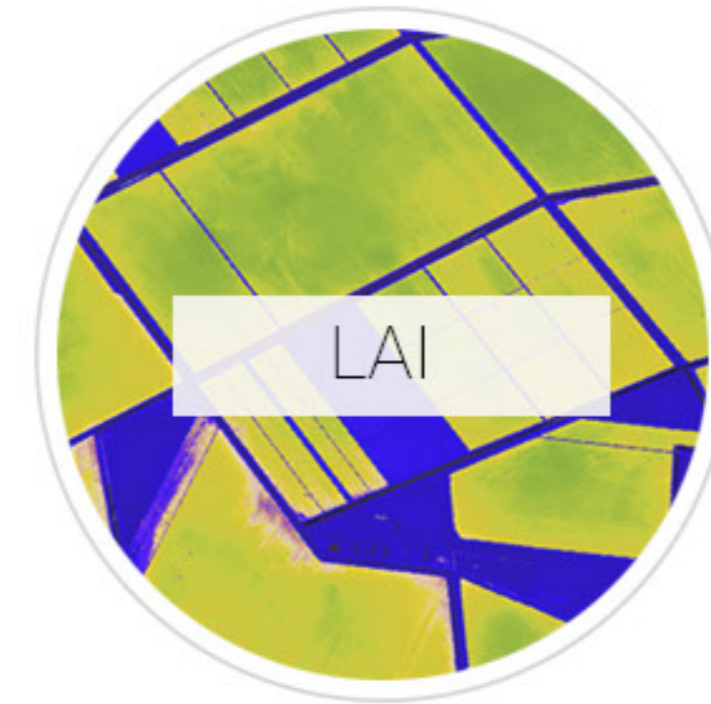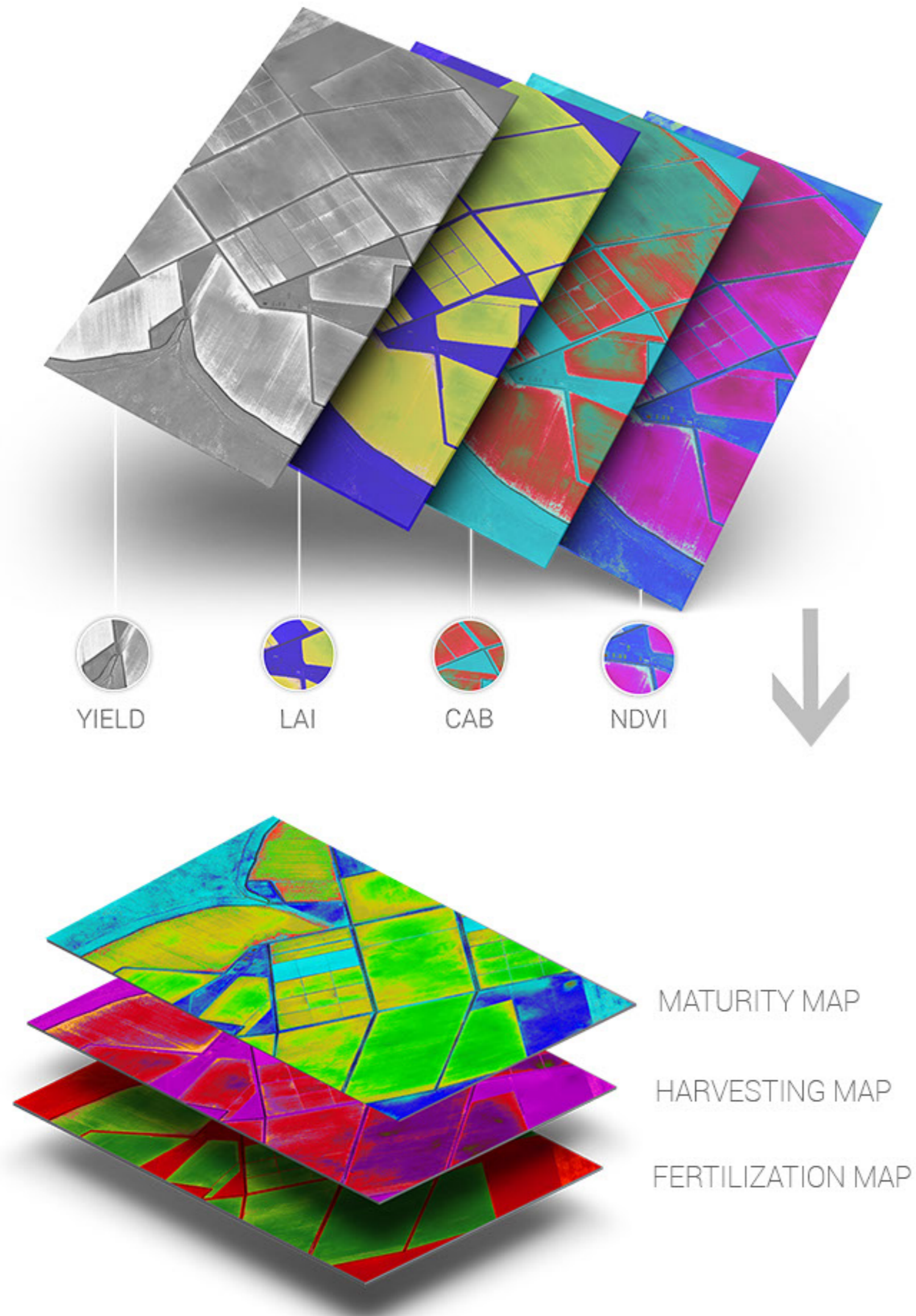
Recognize plant health

All plants both absorb and reflect radiation. In the near infrared band, there is a specific colour range that indicates a healthy plant. If the plant reflects radiation outside of this "healthy" range, it can be asumed that plant is under some kind of stress.

Vegetation indexex

NDVI (*Normalized Difference Vegetation Index*) can be used for monitoring the overall health of the vineyard. Additionally, multispectral images can be used to estimate chlorophyll (**CAB**) as well as **nitrogen** content in plants. Another useful information can be obtained from maps of **LAI** (Leaf Area Index) as indicator of vine capacity.

Recommendation maps

All this information can be linked together and with additional field data. Results can be used for creating maturity maps, harvesting maps, fertilization maps and many more.

VARIABILITY WITHIN THE VINEYARD

For example, in parcels which can be clearly separated into two distinct maturity zones, the temporal strategy is to harvest them at a different time within the harvesting season. Mixture of under-ripe, ripe, and over-ripe grapes in the same vat, could result in decreased wine quality.

HARVEST AND VINIFY SEPARATELY

On the other hand by harvesting and vinifying the different batches separately according to their individual potential, new distinctly different wines can be obtained and the overall quality of wines can be improved.

Our mission is transform collected data into actionable information to support real-time business decisions. We can add value to your imagery through sophisticated maps. All Information are displayed using maps because working with visual tools is always preferred.

*

You can see directly on a map where your attention is needed. Our system also offers weather forecast and weather data storage.

*

We provide our clients with user-friendly web application which allows them to work efficiently with high quality data, manage their vineyard and create valuable statistics.

Tlačidlom zrušiť vrátite zmeny.
Posúvaním lomových bodov editujete prvok.
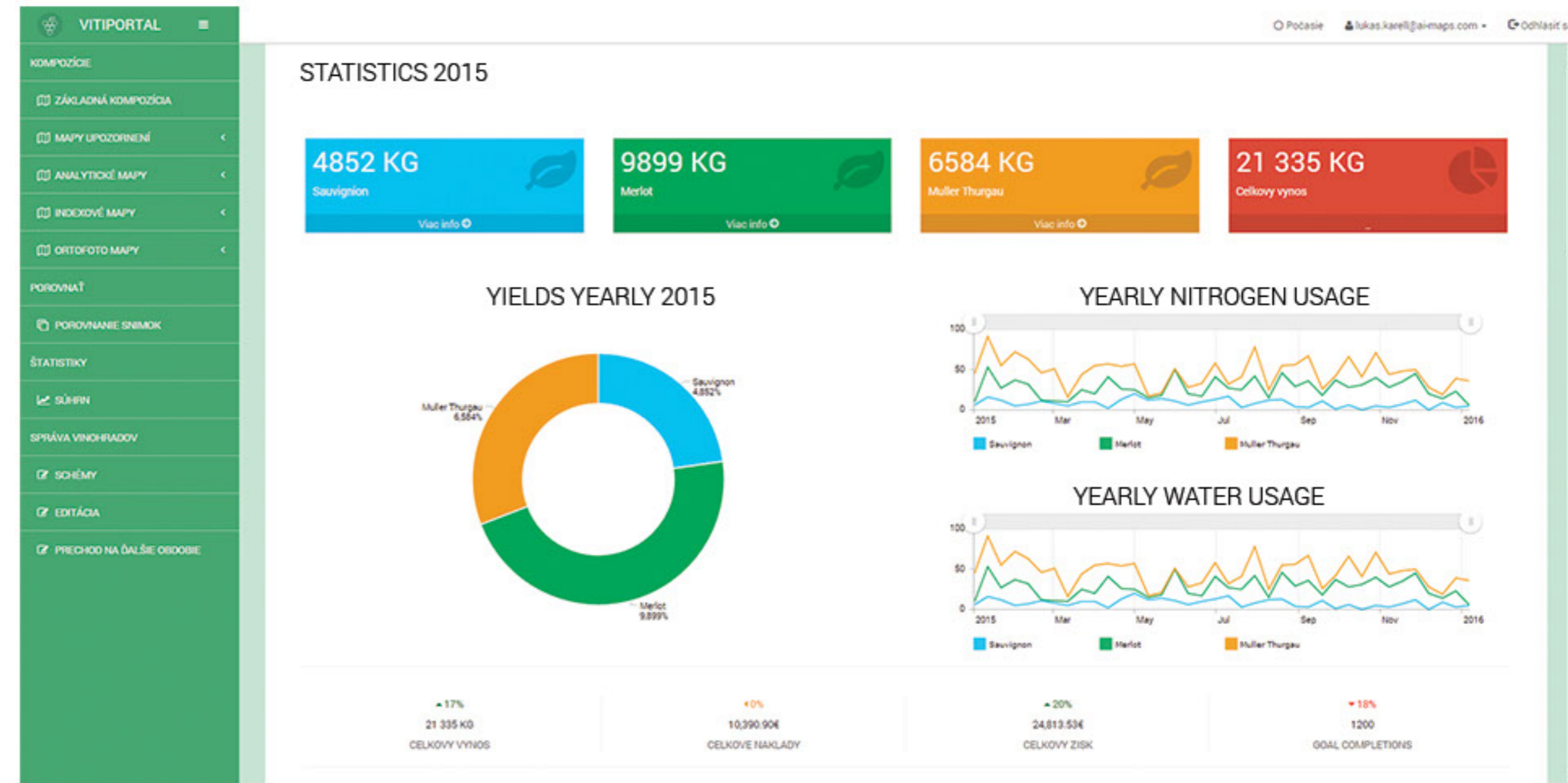
To our clients we provide different types of maps (NDVI, LAI, Nitrogen, Chlorophyll content etc.) which can be used for:

• Develop farm plan
• Guide fertilization strategy
• Guide cultivation plan
• Guide pruning
• Determine neutron probe locations
• Develop harvest plan based on vigor (health) of plants
• Guide sugar sampling
• Guide disease scouting

In addition our precision viticulture system also offers vineyard management tools which can be used for vineyard plan guidance, better decision making and tracking year to year changes.

Drones with advanced sensors and imaging capabilities are giving winegrowers new ways to increase yields and reduce crop damage.

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