



**ZEUSI**

EUROPEAN SPACE IMAGING

# AGRICULTURE SOLUTIONS

---

# RELIABLE INSIGHTS

## FROM THE WORLD'S BEST SATELLITE IMAGERY

European Space Imaging is a leading European Very High Resolution (VHR) satellite imagery provider that has contributed to the Controls with Remote Sensing (CwRS) for the European Commission / Joint Research Centre since 2004. During this time, our data was relied upon by the Commission to determine the requirements for **field boundaries** and accurately identify **crop classifications**. We have always maintained the highest level of success, including five consecutive years at 100% success rate (2017-2021).

Our imagery perfectly complements Sentinel data and can **fill missing data gaps**, particularly where small parcels (<0.2 ha) are concerned. In addition, the data can be used for the **quality control** of the Sentinel based Area Monitoring System and to verify other lower resolution data. It is also both a **cost effective and efficient solution** to updating the national LPIS.

### MAXAR WORLDVIEW CONSTELLATION

4 Active

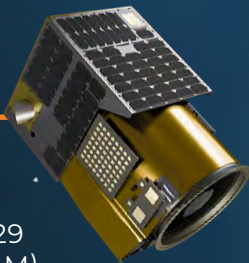
- 30 CM RESOLUTION
- UP TO 16 MULTISPECTRAL BANDS (INCL. 8 SWIR)
- ARCHIVE DATING TO 1999



### SATELLOGIC ALEPH-1 CONSTELLATION

17 Active | 300 Planned

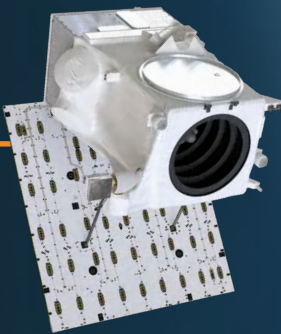
- 99 CM RESOLUTION
- 4 MULTISPECTRAL (99 CM) / 29 HYPERSPECTRAL BANDS (25 M)
- WORLD'S HIGHEST VHR CAPACITY



### MAXAR WORLDVIEW LEGION CONSTELLATION

6 Planned\*

- 29 CM RESOLUTION
- 8 MULTISPECTRAL BANDS
- WORLD'S HIGHEST 30 CM CAPACITY



\* First two satellites will launch Q1/Q2 2023



ACCESS TO **23** SATELLITES | **29 CM - 99 CM** RESOLUTION |  
MORE THAN **15** DAILY REVISITS

# SENSOR OVERVIEW

## AERIAL DATA VS. SATELLITE IMAGERY



### Aerial Data

- ✓ Can cover a large area including a large number of small zones, however the speed of acquisition is slower than satellite imagery, as well as the processing of the data
- ✓ Planning requires long lead times with less flexibility to adjust tasking plans than satellite imagery due to logistics restrictions
- ✓ Must obtain air permits ahead of acquisition and may be subject to restrictions over military zones and air traffic lanes
- ✓ Can image with resolutions up to 10 cm
- ✓ Imagery can be taken in natural or false colour (NIR only)
- ✓ Can fly below clouds to offer cloud free imagery



### Our Satellite Imagery

- ✓ Can cover a large area (significantly larger than aerial) including a large number of small zones in a matter of minutes. Data is directly downlinked in near real-time and available within hours
- ✓ Flexible planning can be adjusted up to 15 minutes before each collection including change of AOI and sensor. Priority tasking can be activated for rapid collection
- ✓ No need to obtain any air permits as the satellites operate in space. Can collect acquisitions over all areas
- ✓ Can image in resolutions up to native 30 cm. With access to a Maxar proprietary HD technology, imagery can be processed to provide 15 cm imagery over entire strips
- ✓ Imagery can be taken in up to 8 multispectral bands or 29 hyperspectral bands
- ✓ Offers a cloud free coverage guarantee of 10% or less



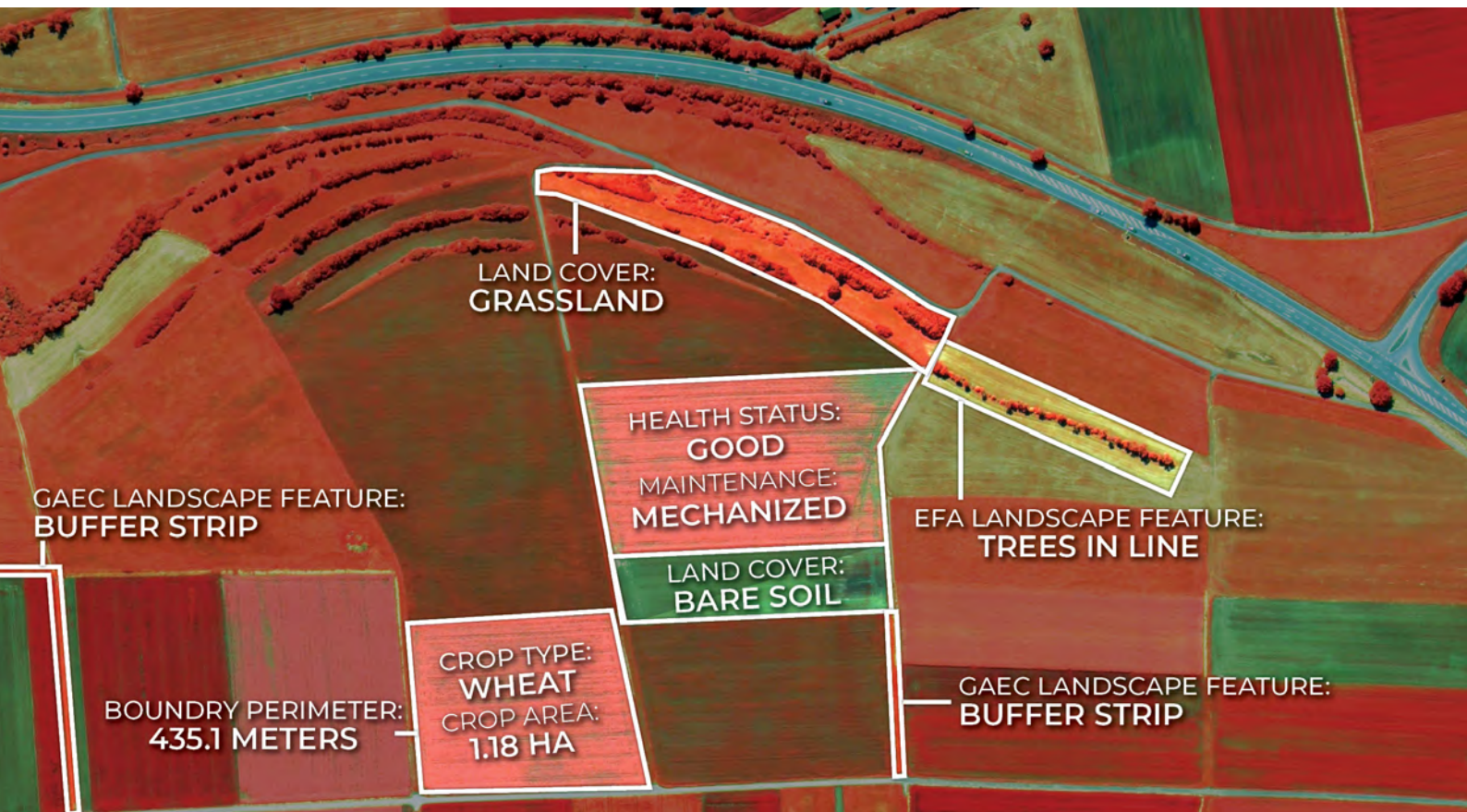
## LAND COVER AT SCALE

With Ecopia GFX Powered by European Space Imaging you can map a variety of features, including sub-hectare boundaries. Objects are all classified on a pixel, making VHR imagery an ideal input increasing the level of detail to be picked up by the AI. The cloud based nature of the automated networks means that the team can scale up capacity seamlessly with the final product delivered in just days. Furthermore, the product can deliver several different styles of "parcels" for land information systems depending on the users requirements. These can be either property based, such as updating a geocoding product, or agriculture based such as determining field boundaries relevant to your project.

# SEEING BEYOND

## THE VALUE OF RESOLUTION

The introduction of decoupled payments has seen the need to identify some landscape elements and land maintenance rules. With the growing introduction of 'greening' requirements, the need to identify more farming practices and quantify landscape elements have also been introduced. Unfortunately, the use of Sentinel data cannot be applied here, with imagery at a resolution of 50 cm or higher being required. Our VHR satellite imagery can support you to accurately identify **Good Agricultural and Environmental Conditions (GAECs), crop type, land cover type, land maintenance, landscape elements and landscape feature quantification**. In addition, our data can be used for the independent control of your LPIS reference system.



## SUPPORT & GUIDANCE

Since 2004, European Space Imaging has had an experienced team of remote sensing geospatial specialists dedicated to the CAP's CwRS and LPIS QA programmes. We have acquired a vast amount of knowledge to the inner workings of these programmes and are **familiar with the requirements of the Member States and Paying Agencies** when addressing these. In addition to the high-quality standards of our imagery, we can provide **consultancy support** and guidance in the areas of: definition of image requirements, feasibility studies to ensure that the image will fit your needs and comply with JRC standards, assist with assurance of check methods and integration of the data into your in-house alternative to G<sup>4</sup>CAP. A dedicated team will assist you from start to end of the imagery collection and delivery phase, activating **priority tasking** to ensure that your acquisitions are treated with urgency, and **near real-time delivery** of the data to meet your project timelines.

