

**Service ID** S00255



**Location** At user's premises, Spain

## Generation of quality terrain datasets over autonomous ground robots

### Provider service

Gradient Technologies

### Link to content

<https://www.agrifoodtef.eu/services/generation-quality-terrain-datasets-over-autonomous-ground-robots>

### Type of Sector

Arable farming, Horticulture, Livestock farming, Tree Crops, Viticulture

### Accepted type of products

Physical system

### Type of service

Collection of test data, Provision of datasets

### Description

This service specialises in generating high-quality terrain datasets using sensor-equipped UGVs (unmanned ground vehicles). By employing autonomous UGVs, the service streamlines the data collection process, ensuring efficiency and accuracy in gathering crucial parameters like humidity, pH, temperature, etc. This equipped UGV navigates diverse terrains, autonomously collecting data in specific locations planned by the user. The automated data collection not only enhances the speed of information gathering but also facilitates the generation of comprehensive datasets. This information is invaluable for professionals seeking to make AI models, make data-driven decisions, and analyse the impact of different strategies on the lands.

## **How can the service help you**

This service addresses the needs of clients requiring extensive information on terrain quality through the automated generation of datasets using UGV technology. With precision, reliability, and speed, customers can not only collect vital information but also create customised datasets tailored to the specific location requirements. Unlike traditional systems with stationary sensors, this solution allows for accurate data collection in locations customers need. For instance, if a customer is analysing the effects of various fertilisers over time across different terrains, this system would automatically and effortlessly provide the data needed to train their tools or simply analyse the data.

## **How the service will be delivered**

Gradiant is committed to collecting quality terrain data aimed at generating datasets. If the client requires additional types of data, Gradiant pledges to assess the feasibility of providing them through other sensors or services.

## **Service customisation**

The dataset generation service for terrain quality data can be provided both at the customer's facilities and terrains in which Gradiant has access through its collaboration with CIAM. Data collection can be carried out as long as the terrain allows safe passage of the UGV without damaging crops or the integrity of the UGV. The service execution time consists of two phases: the first being data execution (variable depending on the customer needs) and the second being dataset generation (practically immediate). Upon completion of the service, the client will receive the generated dataset in digital format corresponding to the selected terrain, only needing to provide the location of the land to be analysed.