**Service ID**

**S00210**

**Location**

France, At user's premises

# Provision of general purpose datasets via multisensored aerial robot

## Provider service

National Institute for Research in Digital Science and Technology  - INRIA

## Link to content

https://agrifoodtef.eu/services/provision-general-purpose-datasets-multisensored-aerial-robot

## Type of Sector

Arable farming, Food processing, Greenhouse, Horticulture, Tree Crops, Viticulture

## Accepted type of products

Other

## Type of service

AI model training, Collection of test data, Data analysis, Data augmentation, Desk assessment, Performance evaluation, Prov

## Description

General-purpose datasets serve two primary objectives: Evaluating mobility algorithms;Developing and assessing general-purpose AI applications. In the context of mobility algorithms, this pertains to classical robotics tasks such as mapping, localization, SLAM (Simultaneous Localization and Mapping), and navigation. Meanwhile, general-purpose AI applications focus on advancing algorithms and feeding decision support systems (DSS) for tasks like but not limited to weed detection, health monitoring, growth and maturity assessment, and yield estimation in areas like arable farming, horticulture, food processing, forestry, and tree management. A significant challenge in developing AI solutions for agricultural robotics lies in the dynamic nature of agricultural environments, which fluctuate with different seasons and weather conditions. To address this, acquiring consistent and periodic data is essential for monitoring these changes effectively. This real-time data collection, often facilitated by aerial robots, is crucial for developing efficient algorithms and AI solutions. Such datasets can support the development of sensor-specific techniques or be leveraged to create multisensory algorithms, enabling more accurate and adaptable systems for agricultural applications.

## How can the service help you

Datasets could help the customer in devising specific solutions needed for end user (farmers) by feeding the decision support system (DSS) for various applications like Soil Preparation, Seeding, Water and Fertilization, Health Monitoring, Growth and Maturity Monitoring, Harvesting, Yield Monitoring, and Environmental Monitoring.

## How the service will be delivered

There might be need of repetitions to deliver this service depending on the customer request or anomaly in the recorded data. The delivery of service could be constrained due the season of crop or vegetation for which this service would be requested. Moreover, depending on the customer needs, customization and location, it could take from weeks to 2-3 months to acquire data each time.

## Service customisation

The equipment along with facilities, and environment used in the service could be customized using specific sensors as per customer need. Additionally, there may be some technical limitations of the robot, and legal regulations need to be considered.