Service ID S00025

Location At user's premises, Sweden

Validation of UAV solutions for crop production under real work conditio

Provider service

Research Institutes of Sweden (RISE)

Link to content

https://www.agrifoodtef.eu/services/validation-uav-solutions-crop-production-under-real-work-conditions

Type of Sector

Arable farming

Accepted type of products

Physical system, Software or AI model

Type of service

Collection of test data, Performance evaluation, Test design, Test execution, Test setup

Description

The service provides essential real-world testing for UAV (Unmanned Aerial Vehicle) innovations in agriculture, helping customers understand how UAV solutions perform in actual farming conditions, specifically in diverse Nordic climates. By assessing UAV's effectiveness, the service provides valuable insight that can be used to refine and adapt the innovation, ensuring the product is market-ready and meets the specific needs of the agricultural sector. The service’s practical approach delivers detailed feedback and data-driven recommendations, helping the customer enhance product performance.

How can the service help you

The service addresses the critical need for reliable, real-world testing of UAV innovations in agriculture.Before using our service, companies are often uncertain about how their innovations will perform in actual farming conditions, which can lead to delays in market entry and potential failures.

Through the service, the customer gains the knowledge and confidence to bring an innovation to market, knowing it has been thoroughly validated and optimised for success.The service can provide valuable insight into performance validation by ensuring that UAV crop production systems work effectively in diverse Nordic climates. It can also provide insightful feedback through detailed, data-driven results to be used in refining and adapting the innovation for optimal performance.

How the service will be delivered

The service can be adapted to specific customer needs.

Examples of Customisation:Tailored Testing Environments: alternative specific Nordic climates or conditions to test the UAV innovation, ensuring it performs optimally in target markets.

CustomisedPerformance Metrics: definition of key performance indicators (KPIs) most suited to the innovation (e.g.,, flight stability, data accuracy or battery life metrics).

Detailed Reporting: variable level of detail in the feedback and reporting, from high-level summaries to in-depth technical analyses.

Service customisation

The assessment journey starts with a joint meeting where the customer discusses different alternatives with an expert team from RISE.

A roadmap for the service is established, and the service can commence.The innovation is tested in real work or work-like conditions in the Nordics, and the work results are evaluated from a potential customer’s point of view. The service is adapted to the actual innovation to be tested.

The following work and facilities are provided by the agrifoodTEF project:Test area and equipment for conducting tests.Storage of the robot platform, including charging capabilities. Personnel, including relevant experts from RISE.Tests can be performed with various types of plants.The service is conducted by RISE at Testbed Digitalised Agriculture in Uppsala.

Outputs:

Deliverables: Upon completion, the customer receives comprehensive documentation, including detailed reports on error handling and failure monitoring, along with any identified recommendations for improvements.