

**Service ID** S00350



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

## Safety and Regulatory Testing for Agricultural Robotics

### Provider service

Danish Technological Institute (DTI)

### Link to content

<https://agrifoodtef.eu/catalogue-of-services/safety-and-regulatory-testing-agricultural-robotics>

### Type of Sector

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

### Accepted type of products

Data, Design / Documentation, Physical system, Software or AI model

### Type of service

Collection of test data, Conformity assessment, Data analysis, Test design, Test execution, Test setup

### Description

This service offers a thorough examination of agricultural robots, focusing on safety validation under diverse operational conditions. It tests stopping distances and response times for mobile robots across various speeds and payloads. Regulatory compliance is assessed to ensure adherence to industry standards. The service utilizes a controlled testing environment that simulates agricultural field conditions, equipped with measurement tools to analyze stopping distances and robot dynamics. Parameters can be adjusted to test different speeds, payloads, and environmental factors, minimizing risks and enhancing reliability in dynamic farm environments.

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

The service addresses the need for reliable and safe robotic systems in agriculture, ensuring that robots meet safety standards, e.g. ISO18497, before real-life deployment. It solves problems related to assessing stopping distances and load management, providing information about robots' operational safety and regulatory compliance.

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

The service allows customisation of testing parameters such as speed, payload, and environmental factors. Limitations include the availability of specific equipment and the need for pre-defined testing protocols. Customers should be aware of the setup requirements in advance.

## **Service customisation**

The service is delivered in a controlled testing environment simulating agricultural conditions and monitoring robots behaviour. It includes multiple test iterations for accurate results. Execution time varies based on testing requirements, and it can be performed at your location or remotely. Customers receive documentation detailing the safety and compliance evaluation. Customers must provide access to robots for testing.