

Service ID

S00070

Location

France



ARPA 3 - Qualification of safety functions ensuring robots keep within th

Provider service

INRAE

Link to content<https://agrifoodtef.eu/services/arpa-3-qualification-safety-functions-ensuring-robots-keep-within-their-working-area>**Type of Sector**

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

Accepted type of products

Design / Documentation, Physical system, Other

Type of service

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

Description

This service evaluates the effectiveness of onboard geofencing safety systems in agricultural robots, ensuring they stay within designated work areas as required by ISO 18497:2024. The test involves the robot following various trajectories that challenge boundary limits. High-precision monitoring ensures compliance, with the robot required to enter a safe state if it breaches the boundary. A manufacturer's representative must be present to oversee the process.

How can the service help you

ARPA3 service helps customers ensure that their agricultural robots reliably respect defined work boundaries, preventing unintended exits from the designated area and enhancing operational safety.

How the service will be delivered

Testing is available year-round, with possible restrictions during the winter season due to soil and weather conditions. Each test lasts approximately three days, depending on the conditions established during the technical meeting, and is carried out on the premises of INRAE - Montoldre - AgroTechnoPôle in France (just two hours from Lyon).

Service customisation

The ARPA3 test can be customised to focus on specific safety features manufacturers wish to evaluate. These features are jointly established before testing. However, the tests determine the robot's ability to respect a designed working area.