

**Service ID**

S00068

**Location**

France



## **ARPA 1 - Qualification of safety systems providing obstacle detection an**

**Provider service**

INRAE

**Link to content**<https://www.agrifoodtef.eu/services/arpa-1-qualification-safety-systems-providing-obstacle-detection-and-robot-safety-0>**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**

We offer a comprehensive testing service to validate the safety functions of autonomous mobile robots and robotic systems. Our tests use a high-precision laser tracker for accuracy to assess your robot's ability to detect and stop when encountering an obstacle, as defined in ISO 18497:2024 (Protocol included in part IV Annex D.2). These tests, conducted at our Montoldre site in France, will help ensure your robot's compliance with industry safety standards. A representative from your team must be present to assist in configuring and monitoring the system during testing.

**How can the service help you**

ARPA1 service helps customers ensure that their agricultural robots can safely detect obstacles. Before service, customers may be concerned about potential collisions and safety risks. After testing, they receive detailed reports on the robots' stopping performance, eliminating uncertainty and confirming safety in the field.

**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 ARPA1 test can be customised to focus on specific safety features manufacturers wish to evaluate. These features are jointly established before testing.