

**Service ID** S00080

**Location** France



## **Performance evaluation of AI and robotics based on physical testing env**

### **Provider service**

Laboratoire National de Métrologie et d'Essais - LNE

### **Link to content**

<https://agrifoodtef.eu/services/performance-evaluation-ai-and-robotics-based-physical-testing-environments>

### **Type of Sector**

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

### **Accepted type of products**

Design / Documentation, Physical system, Software or AI model

### **Type of service**

Performance evaluation, Test design, Test execution, Test setup

### **Description**

By having your AI or robotic system tested by LNE, you ensure it meets the highest standards of safety and performance, boosting your product's reliability and trustworthiness in the market. Partnering with LNE for rigorous testing of your robotic and AI technologies gives you a competitive edge, as our testing report enhances credibility and opens doors to new market opportunities both locally and globally. Testing of devices with AI-integrated control systems by our LE.IA facility focuses on both performance and performance-related safety. Our tests, conducted under controlled laboratory conditions, ensure optimal reproducibility and repeatability, providing reliable insights into the system's efficiency and safety-critical functionalities.

## How can the service help you

This service can significantly benefit agricultural robotics and AI companies by ensuring their systems are reliable, efficient, and safe for real-world applications.

**Performance Validation:** The testing confirms that AI-driven agricultural robots perform optimally in various scenarios, such as autonomous navigation, picking tasks, and precise interventions. This boosts operational efficiency and productivity.

**Safety Assurance:** The focus on performance for safety ensures that robots meet the required safety standards, which is critical in environments where human workers, animals, or delicate crops are involved. This minimises risks and liability.

**Market Readiness:** By obtaining LNE's rigorous performance validation, agricultural robotics companies can demonstrate compliance with industry standards, gaining trust from clients and accelerating market adoption.

**Reproducibility & Reliability:** Testing in controlled conditions allows companies to fine-tune their AI models and robotic

## How the service will be delivered

The testing facility and the evaluation procedure and metrics are customised according to the customer needs of evaluation. Limitations lie in the dimensions of the physical device to host.

## Service customisation

The service includes several technical meetings with AI and robotics evaluation experts to define the evaluation strategy and the procedure. Then, all the tests are realised at LNE, located in Trappes, France. Finally, a testing report is issued to the company. The overall process can take between 3 months and 12 months depending on the complexity of the system and the exhaustivity of the parameters to test.