

Service ID

S00064

**Location**

At user's premises, Poland

Performance and sustainability testing of robotic or AI-driven solutions

Provider service

Łukasiewicz - Poznański Instytut Technologiczny

Link to content<https://agrifoodtef.eu/services/performance-and-sustainability-testing-robotic-or-ai-driven-solutions>**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

Collection of test data, Data analysis, Desk assessment, Performance evaluation, Test design, Test execution, Test setup

Description

This service provides a comprehensive assessment of the performance of systems, focusing on sustainability indicators such as energy consumption and input usage per hectare. It evaluates the impact of artificial intelligence (AI) or robotic solutions on the performance and sustainability of the associated equipment. The service includes tests such as functional testing, accelerated durability testing, and assessments of the system's resilience to environmental factors and electromagnetic interference (EMI). By identifying potential design flaws or manufacturing defects, the service supports the development and optimisation of tested solutions, contributing to sustainable technological advancements.

How can the service help you

This service addresses the need for reliable and actionable insights into the performance and sustainability of AI-driven or robotic systems. By providing detailed assessments of key sustainability indicators, such as energy and input consumption per hectare, the service helps identify areas for optimisation and improvement. Customers receive valuable data on the resilience, efficiency, and environmental impact of their solutions, enabling them to meet sustainability goals effectively.

How the service will be delivered

The service is delivered through a structured workflow designed to assess the performance level of systems incorporating AI algorithms, focusing on parameters that indicate the achievement of required sustainability indicator values.

The customer provides a functional prototype or research model of the solution, along with detailed technical documentation and a description of the technology to be validated. This includes relevant parameters, metrics, and limit ranges. Based on the

Service customisation

The service can be customised based on specific client needs. Testing plans and methodologies are tailored to evaluate parameters critical to achieving sustainability goals, following customer-provided guidelines or applicable standards. Additional features, such as high-speed process analysis or modal analysis, can be included and may require minor prototype modifications, like attaching sensors.