

**Service ID** S00337



**Location** Denmark

## **Custom AI-Optimized Testing Protocol Design for Agricultural Solutions**

### **Provider service**

Danish Technological Institute

### **Link to content**

<https://agrifoodtef.eu/services/custom-ai-optimized-testing-protocol-design-agricultural-solutions-0>

### **Type of Sector**

Arable farming, Greenhouse, Horticulture, Livestock farming

### **Accepted type of products**

Design / Documentation

### **Type of service**

Test design, Test setup

### **Description**

We specialise in designing comprehensive testing protocols for the physical testing of customer solutions in the agricultural sector. Our approach focuses on creating consistent procedures that enhance the precision of AI models developed from the collected data. These protocols are carefully crafted to meet individual customer and project needs, incorporating requirements for both laboratory and field testing scenarios. We prioritise automation in data collection to ensure consistent and repeatable testing procedures, which is crucial for high-quality data collection. This service bridges the gap between physical testing and AI model development, providing a solid foundation for advancing agricultural technologies.

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

This service helps customers optimise their testing processes for agricultural solutions, particularly those involving AI development. By using our custom-designed protocols, customers can ensure that their physical tests yield high-quality, consistent data that is ideal for training and refining AI models. This approach reduces data inconsistencies, minimises errors, and accelerates the development cycle of AI-driven agricultural technologies. After using our service, customers will have a robust, repeatable testing framework that enhances the reliability and effectiveness of their AI models, leading to more accurate and efficient agricultural solutions.

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

We can tailor the testing protocols to various agricultural sectors, types of technology (e.g., robotics, sensor systems, crop management tools), and specific AI model requirements. Customisation options include adjusting data collection frequencies, specifying environmental conditions for testing, integrating with existing farm management systems, and designing specialised automation processes. We can also adapt protocols for different scales of operation, from small experimental plots to large commercial farms. Limitations may apply to extremely specialised equipment or unique environmental conditions that are difficult to replicate consistently.

## **Service customisation**

The service begins with a detailed consultation to understand the customer's specific needs and the nature of their agricultural solution. Our team then designs a custom testing protocol, which is delivered as a comprehensive document. This can be followed by on-site implementation support at either our facilities in Denmark or the customer's location, depending on the nature of the tests. The timeline for protocol development typically ranges from 2-4 weeks, with implementation support extending as needed for the duration of the testing phase. Customers will receive the protocol document, training on its implementation, and ongoing support for any necessary adjustments.