

**Service ID** S00336

**Location** Denmark



## Data Collection for Advanced Agricultural Environmental Monitoring and

### Provider service

Danish Technological Institute (DTI)

### Link to content

<https://www.agrifoodtef.eu/services/data-collection-advanced-agricultural-environmental-monitoring-and-analysis-systems>

### Type of Sector

Arable farming, Greenhouse, Horticulture, Livestock farming

### Accepted type of products

Data, Design / Documentation, Physical system

### Type of service

AI model training, Collection of test data, Cybersecurity, Data analysis, Data augmentation, Performance evaluation, Provision

### Description

We offer cutting-edge technical systems, both hardware and software, along with expert knowledge for collecting and analysing relevant environmental data during agricultural testing. Our service emphasises the use of standardised protocols to ensure enhanced accuracy and efficiency. We provide a comprehensive suite of monitoring and analysis tools, including methane detection systems, PTR-MS for volatile organic compound analysis, GHG measurement using CRDS technology, and automated climate data collection using IoT sensors and AI algorithms. These advanced systems enable precise environmental monitoring and data analysis for agricultural research and development.

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

This service helps agricultural researchers, technology developers, and farmers gain detailed insights into environmental factors affecting crop growth, livestock management, and overall farm efficiency. By utilising our advanced monitoring and analysis systems, customers can accurately measure and analyse various environmental parameters, including greenhouse gases, volatile organic compounds, and climate data. This information is crucial for developing sustainable farming practices, optimising crop yields, reducing environmental impact, and complying with environmental regulations. After using our service, customers will have comprehensive, data-driven insights to inform their agricultural strategies and technology development.

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

We can customise our monitoring systems to focus on specific environmental factors of interest to the customer. This may include adjusting sensor types, modifying data collection frequencies, or developing custom AI algorithms for specific analysis needs. We can also integrate our systems with existing farm management software or IoT platforms. Limitations may apply to the geographical area that can be covered and the specific compounds that can be detected, depending on the chosen technology.

## **Service customisation**

The service is designed to be delivered primarily on-site in Denmark, but some work can be conducted at our facilities in Denmark. The duration of data collection and analysis can be customised based on the customer's needs, ranging from short-term studies (a few days) to long-term monitoring projects (several months). Customers will need to provide access to the agricultural environment they wish to study. At the end of the monitoring period, customers will receive a detailed report of the collected data, analysis results, and interpretations. Our team can also provide ongoing support for data interpretation and system maintenance.