

Service ID NEW1

Location Remote



Assessment of data architecture for agrifood applications

Provider service

GRADIANT

Link to content

<https://agrifoodtef.eu/catalogue-of-services/assessment-data-architecture-agrifood-applications>

Type of Sector

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

Accepted type of products

Software or AI model

Type of service

Desk assessment

Description

This service helps agrotech companies optimise and scale their existing software and AI solutions. We evaluate your current technology stack, data architecture, and system performance to identify opportunities for improvement and growth. Our expert team analyses key aspects such as system resilience, scalability potential, and integration capabilities to provide actionable recommendations. Through a systematic testing review process, we help you understand how your solution can handle increased workloads, adapt to new use cases, and maintain performance as your business grows. We assess critical factors like data management, processing efficiency, and system architecture, translating technical challenges into clear business opportunities. Our recommendations focus on practical steps to enhance your solution's reliability, expand its capabilities, and prepare it for future growth. The service includes detailed analysis reports, specific improvement recommendations, and strategic guidance for implementing changes, ensuring your agrifood technology solution is ready to scale and meet evolving market demands.

How can the service help you

This service addresses the common challenge faced by agritech companies when their software or AI solutions need to evolve beyond their initial scope. Companies may face issues like slow performance under increased workloads, difficulty adapting to new use cases, or concerns about system reliability.

They may be unsure about which technical improvements would deliver the most business value or how to prioritise development efforts. After engaging with our service, companies get identified gaps and deliver strategies that help them refine their product and get it ready for broader market adoption. They gain detailed insights into their system's current limitations and concrete recommendations for improvement. For example, if a company has developed an AI system for crop monitoring that works well for a single farm, our assessment would reveal exactly how to modify the system architecture and data processing to handle multiple farms simultaneously.

Companies also learn which specific technical improvements will have the biggest impact on their solution's performance and scalability, allowing them to make informed decisions about resource allocation and development priorities. Beyond technical improvements, the service helps companies understand the broader implications of suggested changes, including

How the service will be delivered

The service can be tailored to accommodate the customer's desired features, based on the customer's final goal. As an example, a company has developed an AI system for crop monitoring that works well for a single farm and wants to handle 50 farms simultaneously.

Our assessment would analyse features like possible bottlenecks, required system memory and storage, network bandwidth requirements, and the associated infrastructure costs for such expansion. The assessment can be comprehensively customised according to the specific system under evaluation. This includes thorough examination of data systems architecture, processing pipeline efficiency, algorithmic performance under load, and the final integrated system where the solution operates. Whether the focus is on database scalability, real-time processing capabilities, machine learning model performance, or end-to-end system integration, our analysis adapts to the technical stack and operational requirements.

The metrics concerning system resilience and scalability are selected based on the customer's specific requirements and strategic priorities for their solution. These may include response time under varying loads, fault tolerance capabilities, resource utilisation efficiency, cost per transaction scaling, or recovery time objectives. Customers should be aware that the assessment timeline may vary depending on system complexity and the depth of analysis required, typically ranging from

Service customisation

The service is delivered through a structured assessment process that typically spans 4-6 weeks. The engagement begins with an initial consultation to understand your solution's current state and business objectives. Following this, our team conducts a detailed technical assessment.

During the assessment period, we require access to your system's technical documentation, architecture diagrams, and performance metrics. If possible, access to a test environment or development instance of your solution will help us provide more accurate analyses. Our team will also need to conduct interviews with key technical staff and stakeholders to understand current challenges and future requirements.

You'll receive a comprehensive report detailing the key bottlenecks we've identified, along with actionable insights to help you overcome them and accelerate your path to market readiness.