

Service ID S00392



Location At user's premises, Netherla

Economic Assessment of Agricultural Robotics

Provider service

Wageningen University WUR

Link to content

<https://agrifoodtef.eu/catalogue-of-services/economic-assessment-agricultural-robotics>

Type of Sector

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

Accepted type of products

Data, Design / Documentation

Type of service

Business modelling, Data analysis, Market research, Performance evaluation, Test design

Description

The Economic Assessment service offers stakeholders a structured evaluation of the financial viability of agricultural robotics and automation. The service goes beyond harvesting robots alone and can be applied to a wide range of robotic applications, including weeding, pruning, monitoring, transporting, and processing. Using a transparent cost-benefit model, it accounts for fixed, variable, and indirect costs, as well as expected benefits such as labour savings, efficiency gains, and improvements in product quality. Data is collected through stakeholder interviews, technical specifications, and scenario analysis, ensuring realistic outcomes. Customers receive clear indicators such as cost per unit of output, return on investment (ROI), and payback period under different operational conditions. The service also provides strategic insights that support investment decisions, subsidy applications, and long-term planning, helping decision-makers understand under which circumstances robotics become a cost-effective and competitive solution.

How can the service help you

Before the service, customers may lack clarity on whether their robotic innovation or investment will be economically viable. After the service, they receive structured calculations, scenario-based comparisons, and actionable insights that highlight both risks and opportunities. This enables farmers, developers, and investors to make well-founded choices, strengthen their business cases, and accelerate the adoption of automation.

How the service will be delivered

The assessment can be adapted to different types of robotic applications (e.g., harvesting, crop monitoring, weeding, pruning, logistics, and processing). Customers may choose the scope of the analysis, such as focusing on a single function or including multiple tasks performed by the robot. Scenario depth and detail are adjustable depending on the case.

Service customisation

The service combines structured interviews, economic modelling, and scenario analysis. Inputs include technical performance data, labour costs, and expected operational savings. The analysis is tailored to the case and results in a professional report with key financial indicators, comparative results across scenarios, and recommendations for strategic decision-making. The service can be delivered remotely with provided data or in hybrid form with on-site interviews.