**Service ID** S00003

**Location** At user's premises, Belgium,

# Evaluation of sustainability of food processing through LCA

### Provider service

Instituut voor Landbouw-, Visserij- en Voedingsonderzoek (ILVO)

### Link to content

https://agrifoodtef.eu/catalogue-of-services/evaluation-sustainability-food-processing-through-lca

### Type of Sector

Food processing

### Accepted type of products

Design / Documentation, Physical system

### Type of service

Desk assessment, LCA assessment

### Description

Our service offers an AI-driven Life Cycle Analysis (LCA) to evaluate the sustainability of your food processing operations, utilising a combination of automated data collection and advanced analytics. By leveraging over 60 pilot-scale food processing technologies—ranging from traditional to cutting-edge methods—we quantify energy use, emissions, and resource efficiency. These insights enable companies to fine-tune ingredients, processing conditions, and operational settings to minimise their environmental impact while maintaining product quality and efficiency.Interested in this service? Contact us at agrifoodtef@ilvo.vlaanderen.be

## How can the service help you

Our service provides:

• Automated LCA assessments to determine energy consumption, emissions, and resource use in food processing.

• Comparative analysis of innovative vs. traditional processing techniques to ensure sustainable choices.

• Optimisation guidance based on AI-driven analytics, enabling reductions in energy consumption and environmental impact.

• Industry compliance insights, ensuring alignment with sustainability certifications and regulatory frameworks.

## How the service will be delivered

> Scalability: The service can be adapted to both pilot-scale and industrial-scale food processing environments.

> Technology selection: Clients can choose specific processing technologies to assess.

> Regulatory alignment: Analysis can be customized for compliance with environmental and sustainability standards.

> Integration options: AI-driven analysis can be incorporated into existing quality control and monitoring systems.

## Service customisation

> Data collection: We integrate sensors and AI models into your processing line to monitor key sustainability metrics.

> LCA analysis: AI-driven models quantify energy use, carbon footprint, and waste output.

> Customized reporting: Clients receive an in-depth report with actionable recommendations for process optimization.

> Support & adaptation: Continuous feedback loops allow for improvements in processing conditions and ingredient use.

> Location: This service can be conducted at ILVO’s facilities or on-site at the client's processing plant.