



**Integrating agroecology  
with the downstream:  
non-food value chains**

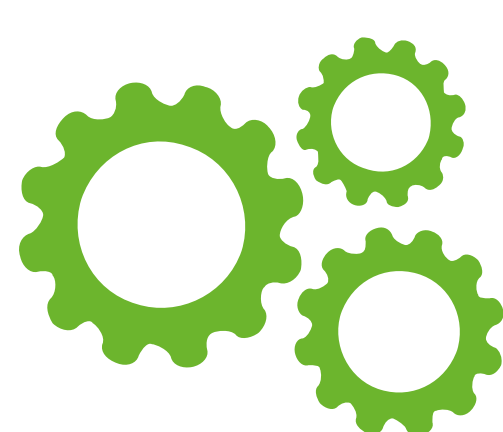


**AGRI  
Innovation** summit 2019

## Operational Group

### Mobile hygienization

Mobil hygienisering



## Practical problem

Today there is no suitable commercial system available for hygienization of organic waste before digestion in small scale on farm biogas plants.



## Partners

MMGkonsult AB, TCkraft, Kjellstedt consulting, MINAB and RISE – Agrifood and Bioscience.



## Calendar

Start: 01/04/2017  
End: 31/12/2019



## Budget

Total amount:  
€244,000

## Objectives of the project

The objective of this project is to develop container-based hygienization equipment. The system will be suitable to serve a cluster of small-scale biogas plants with treatment of organic waste from local food producers. A container-based system enables physical move if the situation changes, which in turn makes the investment more flexible.

## Main activities

The main activities are system design, construction, control system development, test with water, field test with manure, application for permits and then full-scale demonstration. The demonstration will be conducted on fish offal and the hygienized product will be digested at local biogas plants.

## Expected results

The project is expected to produce a plug-&-play system for hygienization of organic by products through pasteurisation at 70°C, which complies with the requirements in the Animal by-products Regulation. The system will be adapted to the needs of farm-based biogas plants and small-scale food producers. It will be suitable for a cluster of biogas plants to co-own the equipment and hygienize by-products from food producers and then distributing the substrate to the biogas plants.

## Results so far/first lessons

Storage, heating and cooling tanks together with heat exchanger have been constructed and installed in a 20-foot container. Then control system and heating system have been developed and tested with water. After that, the system has been tested with liquid manure. Now the project awaits necessary permits to go on to full scale tests with fish offal.

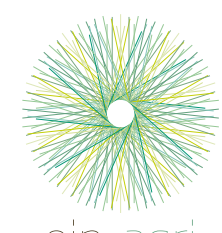
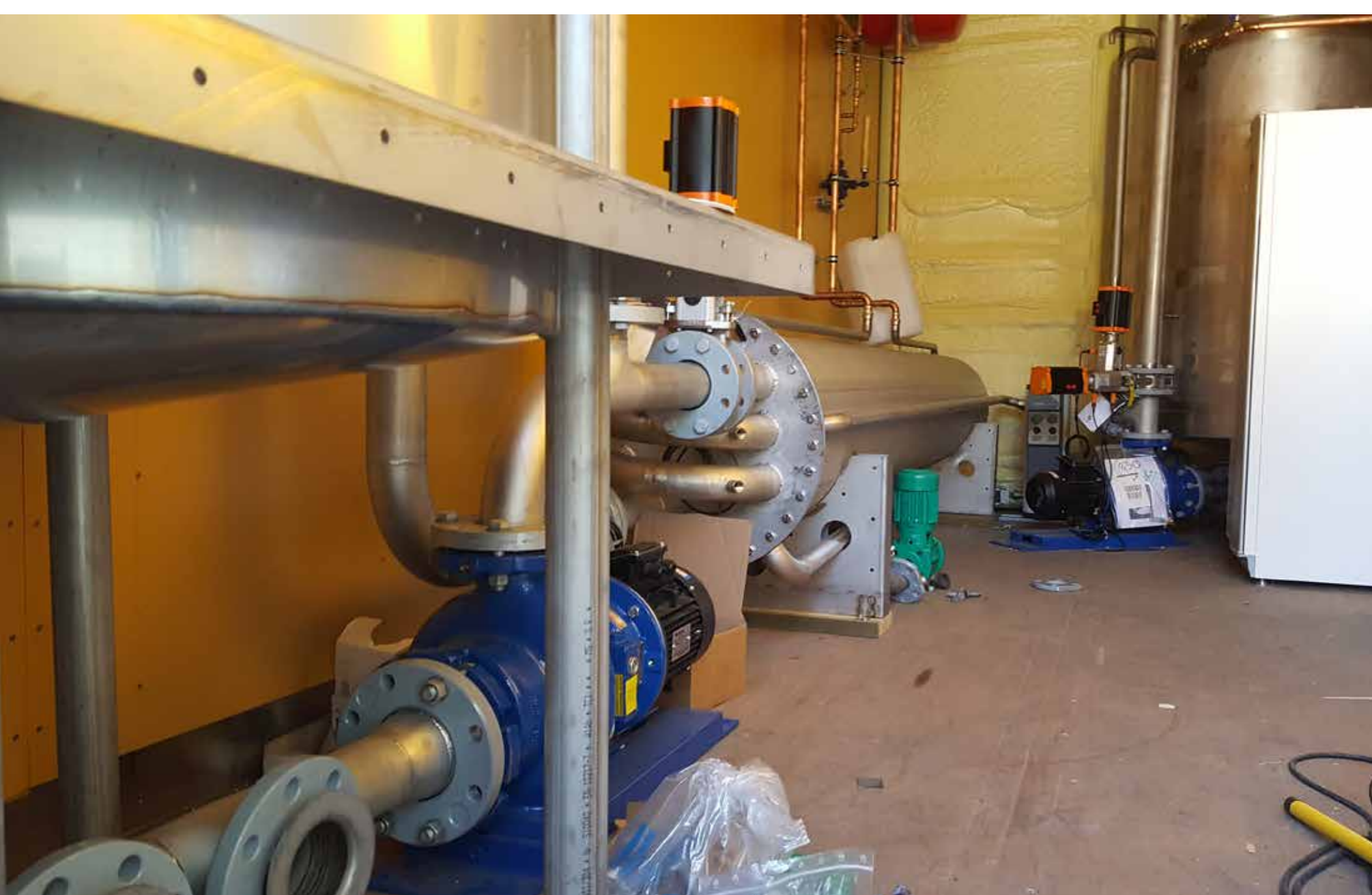
## Who will benefit

This system will contribute to regional development and better business climate for farmers and food producers in less populated regions. Small scale biogas producers can expand their business by digesting more organic waste products. This will lead to increased biogas production as well as a higher value biofertiliser and higher volume of biofertiliser. This can increase the availability of organic fertiliser in these regions. Food producers in these regions will benefit from this innovation since it is often a long distance to large scale facilities that can threat organic waste and small scale hygienization system will by that reduce the transportation cost.

**Supported by:**



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