

SAMS System

- An open source technology from the EU funded project "ITApic"(ICT-AGRI-12 - FP 7), including:
- An Apiary Sensor Unit (ASU) developed by University of Kassel
- Decision Support System (DSS) developed by Latvia University of Life Sciences and Technologies, which will be developed further during the project

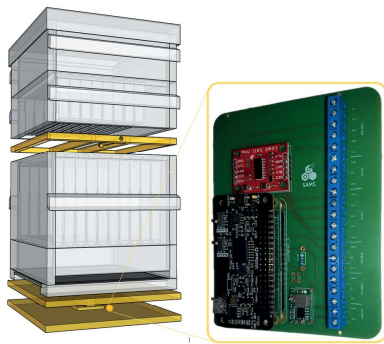


Figure 1. Modular Beehive Sensor System

Objectives

- Promote and advance forms of existing beekeeping
- Monitor bee colonies in Germany, Ethiopia and Indonesia through an open source technology
- Evaluate gained information and convert them into recommendations for beekeepers
- Overcome country-specific challenges of beekeeping and simplify the management of bee colonies
- Gain information on bee mortality

The ICT Solutions

- Allow active monitoring and managing of bee colonies
- Ensure bee health and bee productivity
- Give answers to the requirements of beekeeping in developing countries
- Available as an open source technology

Results

- Physical low-cost beehive model, including open source beehive sensor system
- DSS to combine the sensor-based data-outputs with other information sources and predictive models to measure, analyse and describe different states of the bee colonies such as health, vitality, production, etc.
- An automatic advisory support tool to support bee-management and to avoid losses
- Higher rate of organization of beekeepers to increase the impact
- Job creation along the whole value chain of honey

Impact

- Higher rate of organization of beekeepers to increase impact on markets
- Interconnection with stakeholders along the value chain
- New and open trade regulations
- Developed ICT tools will make beekeeping more efficient

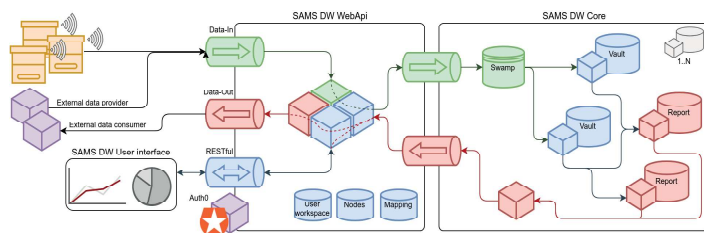


Figure 2. Monitoring and Decision Support System (DSS) Architecture

Advisory Boards in Ethiopia, Indonesia and the EU support the SAMS project with their expertise



Figure 3-6. Various local types of beehives in Ethiopia and Indonesia