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CURRENT TRL
& TARGET TRL

325

SILO SENSORS

- 15%

CO2 EMISSIONS

- 10%

COSTS

COUNTRIES

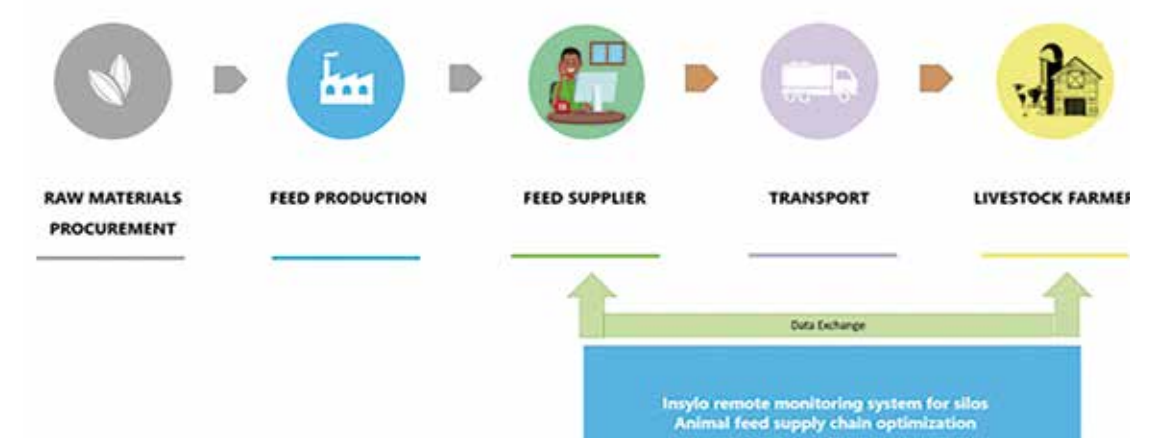


PARTNERS



5.5 FEED SUPPLY CHAIN MANAGEMENT

The animal feed industry, mainly represented by feed suppliers and livestock farmers, currently faces great inefficiencies due to outdated supply chain management. Stakeholders struggle with the timing and quantity evaluation when restocking their feed silos, significantly affecting cost and labour efficiency. This use case thus develops an integral feedstock management system to optimise the entire supply chain.



HOW IT WORKS



Feed Supply Chain Management makes use of an IoT enabled, smart volumetric sensor, to obtain an accurate measure of the silos' stock levels.

The INSYLO technology, consists of a 3D sensor with embedded algorithms that scans the inner silo and calculates the content's volume.

The device is fully independent of the resources available on the farm as it is powered by solar energy and has embedded cloud connectivity systems. The cloud platform collects data from the silos along with relevant production information from livestock farmers and feed suppliers. In combination with Big Data and AI, it enables the optimisation of refilling orders, production batches, shipping routes and raw materials purchases.

The app platform also provides web services to facilitate the transactions between feed suppliers and livestock farmers, allowing stakeholders easier data access. Ultimately, feed suppliers can automatically generate the refilling orders based on cost criteria and send them to the farmers who can accept or reject them with a simple click.

THE IMPACT

OUR OBJECTIVES

- Deploy and test three IoT-based Feed Supply Chain testbeds (2 small-scale + 1 large-scale);
- Demonstrate proposed solution's technological and economic viability;
- Validate exploitation and scalability of the project results.

ON ECONOMY

- By translating silo stock level information into management information, farm efficiency gains are made as farmers and feed suppliers can optimise the supply chain.
- Reduction of feed supplier's logistic costs (-10%);
- Annual savings per silo 250-500€;
- ROI per silo per year 150€;
- Farmer worktime efficiency savings -22 days per year.

OTHER IMPACT

- Reduction of CO2 Emissions (-10 to -15%);
- Logistics optimisation;
- Supplier inventory levels and production lots reduction;
- Decreased feed waste.