

IOF2020

(INTERNET OF FOOD & FARM 2020)

Making precision farming a reality

CHARI VANDENBUSSCHE

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Grant Agreement no. 731884. Visit iof2020.eu for more information about the project.



IOF2020 IN BRIEF



**71 PARTNERS
ORGANISATIONS**



**16
COUNTRIES**



4 YEARS
Start = January
2017



**€35 MILLION
BUDGET**
(€30 million co-funded
under EU H2020
programme)

IOF2020 - PROJECT OBJECTIVES

IoF2020 fosters a **large-scale uptake of IoT** in the European farming and food sector. It aims to:

1. Demonstrate the **business case of IoT** in farming and food sector;
2. **Reuse** available **IoT technologies** and exploiting universal infrastructures;
3. Ensure **user acceptability of IoT** solutions by addressing user needs and concerns;
4. Ensure the **sustainability of IoT** solutions beyond the project.



IoT in the farming sector

5 TRIALS, 19 USE CASES



ARABLE



FRUITS



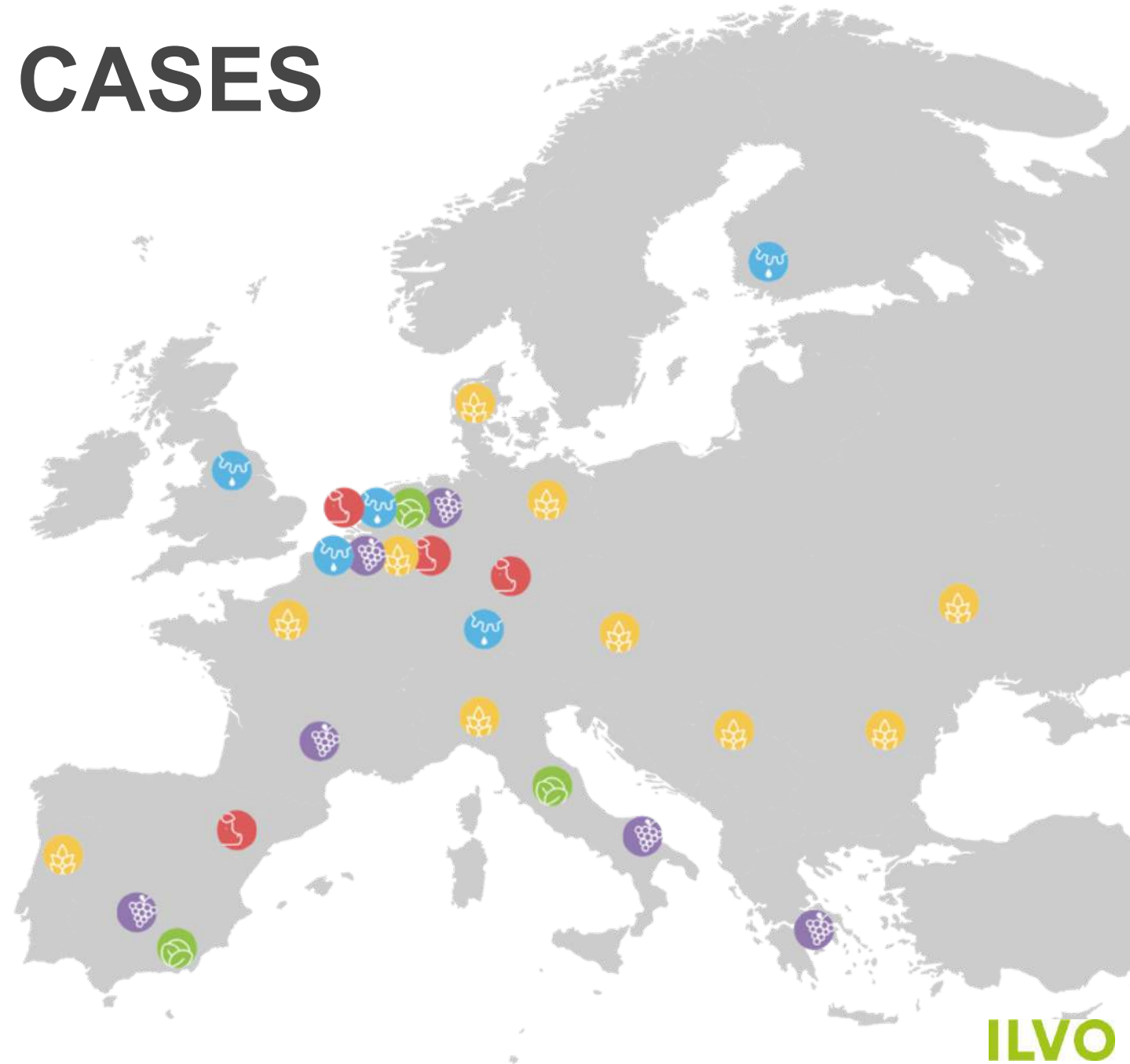
DAIRY



VEGETABLES

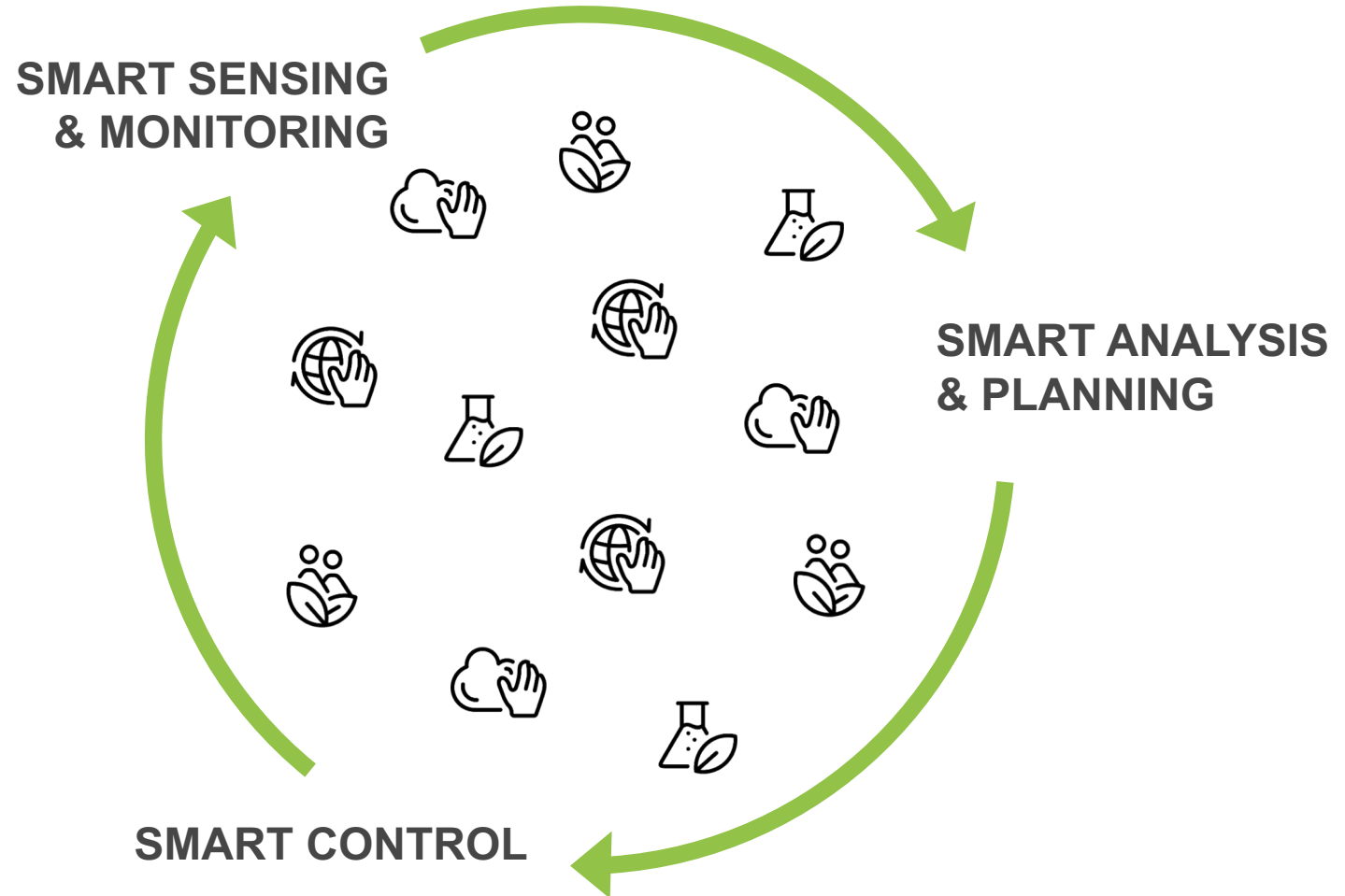
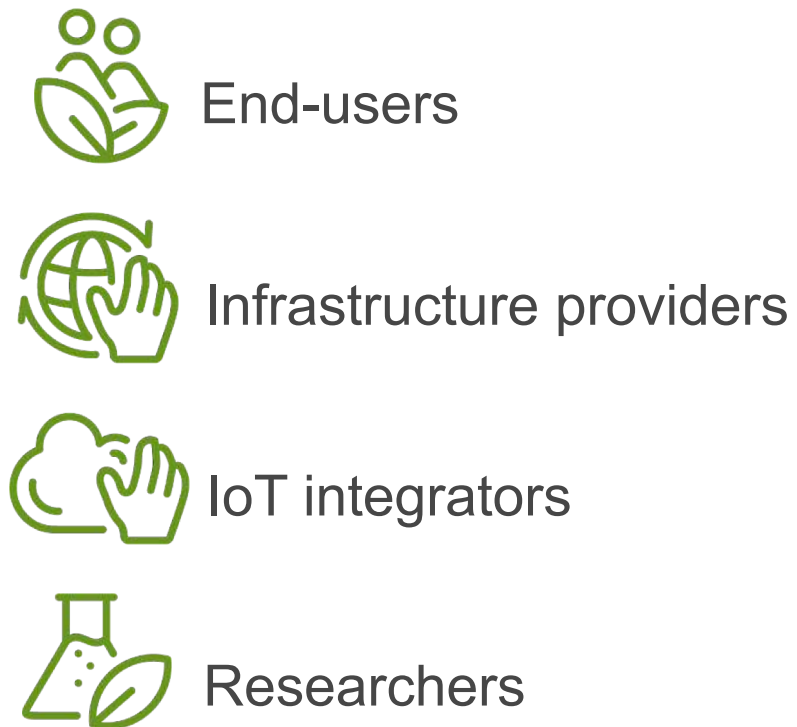


MEAT



www.iof2020.eu

A MULTI-ACTOR APPROACH

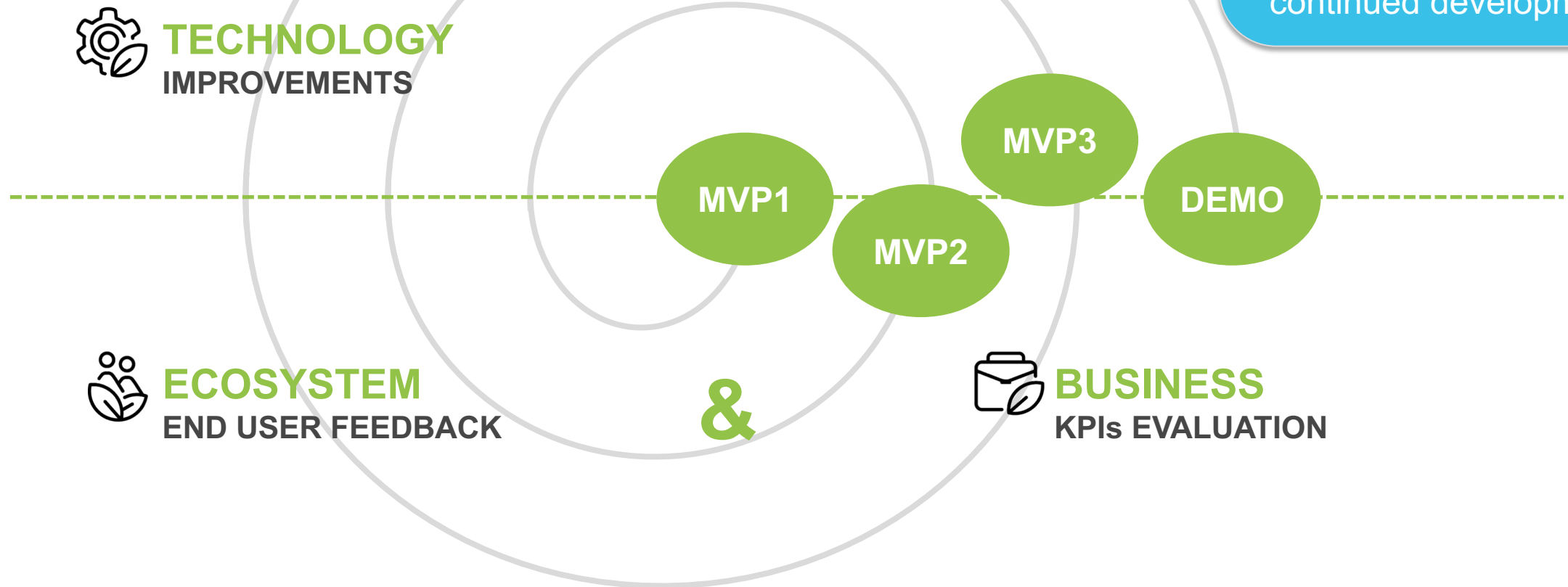


METHODOLOGY

LEAN APPROACH

MINIMAL VIABLE PRODUCT:

a product with just
enough features to gather
validated learning about
the product and its
continued development





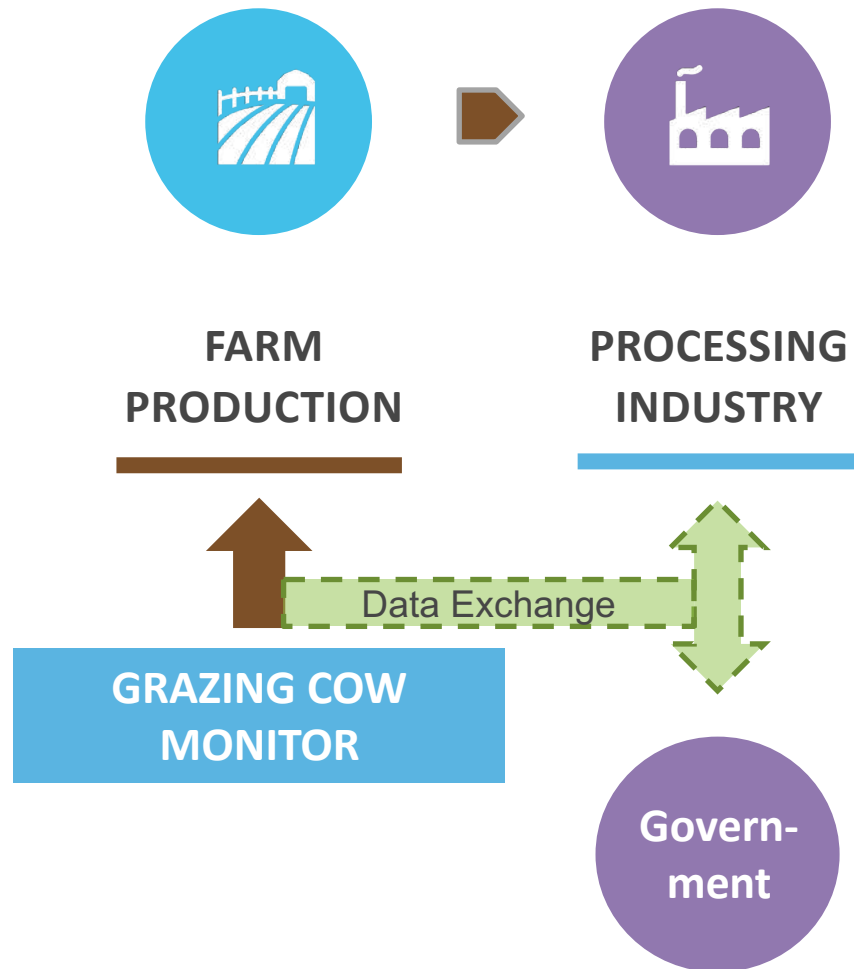
UC2.1 GRAZING COW **MONITOR**

Automatic monitoring and proving of pasture times and animal activity per cow





THE VALUE CHAIN



- Grazing cow monitor

- Monitor grazing time
 - Pasture milk
 - Ammonia reduction

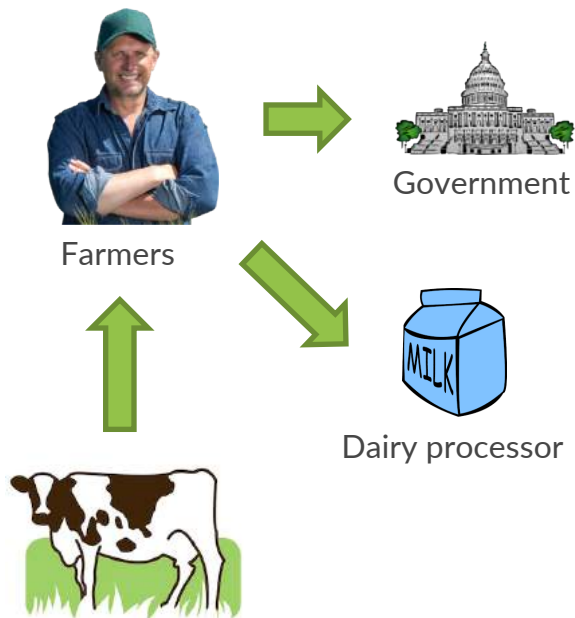


- Activity of cows
- Pasture preferences
- Location of cows in extensive grazing
- Protection against theft

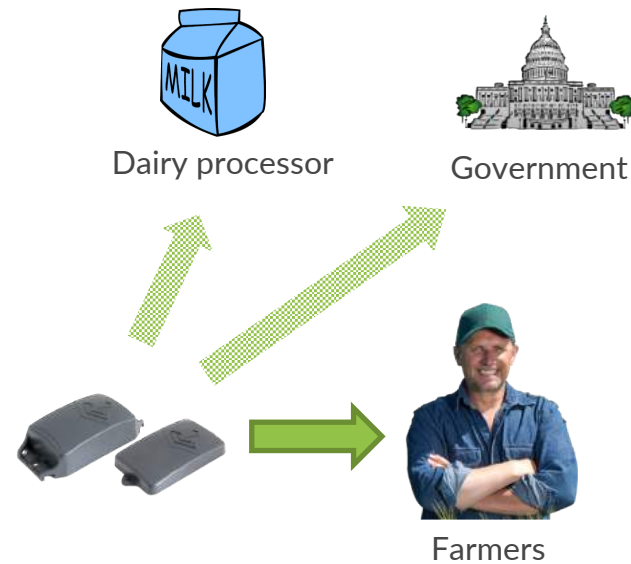


PRODUCT FACT SHEET

Current situation



Grazing cow monitor



Product goals



Labor time

- 10%



Tracking accuracy

+ 5%



Traceability

100%



TECHNOLOGY CONCEPT: SENSOLUS STICKNTRACK

100% self
installed



Long battery
life



GPS+ BLE
tracking



sigfox

Low power tracking on Sigfox network

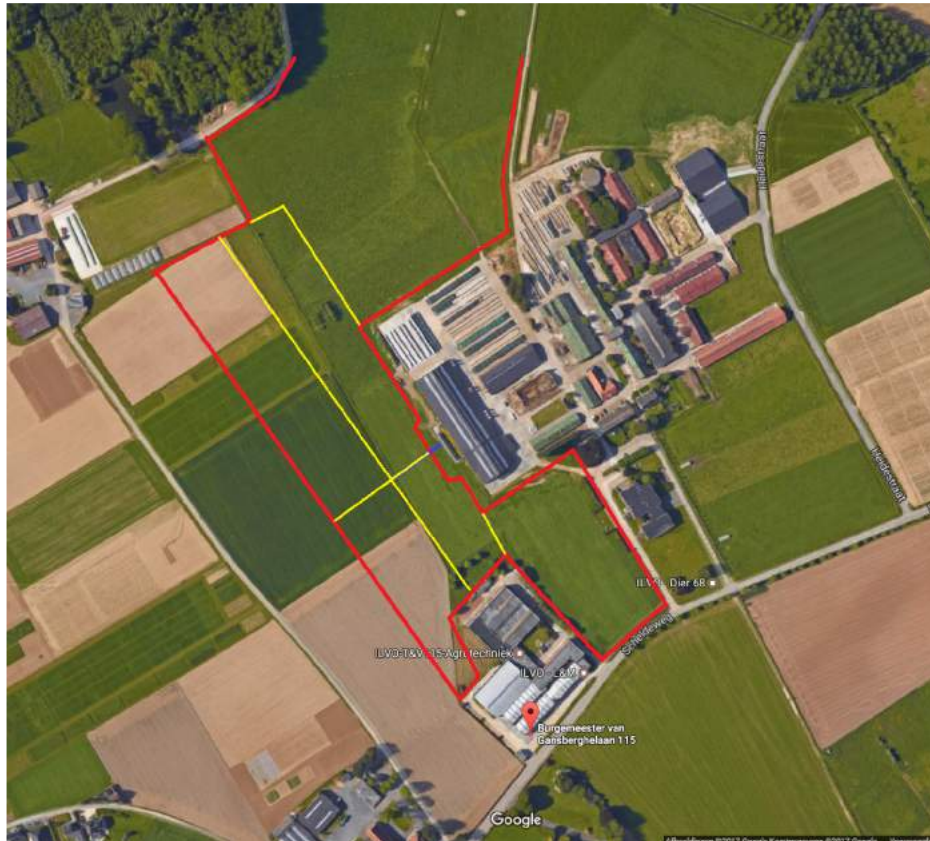




CURRENT STATUS

TECHNOLOGY INSTALLED ON 2 DEPLOYMENT SITES

ILVO Research barn



Commercial dairy barn



CURRENT STATUS

TRACKED COW MOVEMENTS



Current work: developing tracking algorithms to define indoor/outdoor location of the cow



UC5.1 PIG FARM MANAGEMENT

Smart pig farm management services in real-time

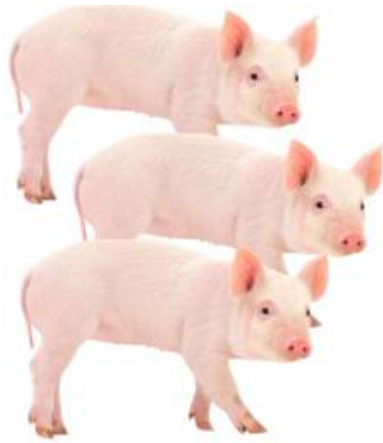
ILVO



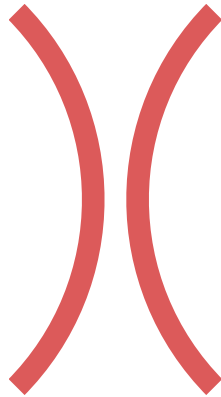
ILVO



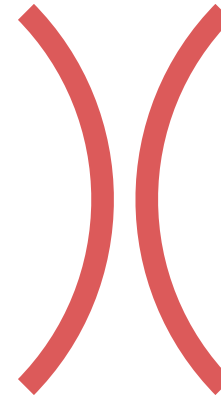
MANAGEMENT OF THE PIG FARM



Data gathering



Analytics



Info to farmer

- **GOAL:** provide the pig farmer with **crucial information** to optimize their pig farm management



PRODUCT USER STORY

Current situation



You only know what's happened when it's too late



Data sources shattered



Only group level and farm level data

With our product



Real-time alerts make you react as soon as the problem occurs



Complete data integration



Individual monitoring

Goals

Health problems & mortality

- 10%

Optimized process steering

+ 20%

Individual monitoring

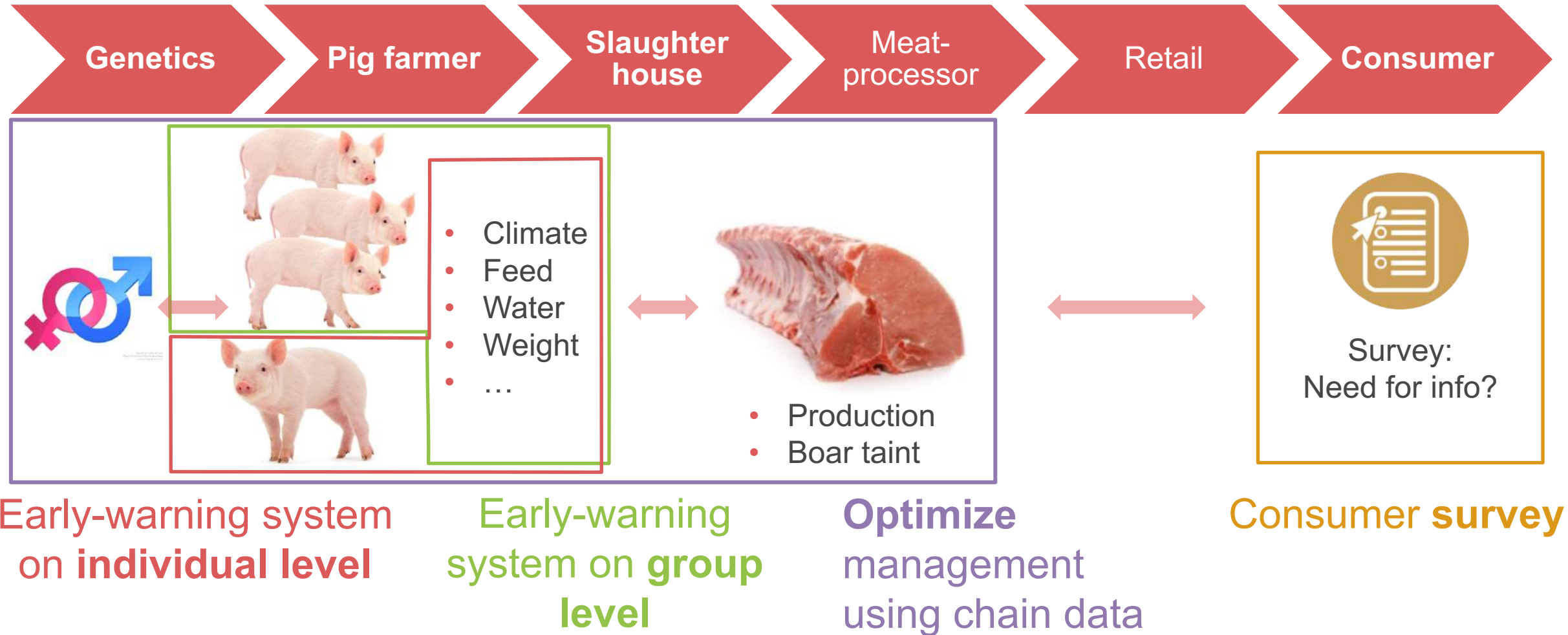
100%

Target User – Medium to large size farms (>1000 slaughter pig places)





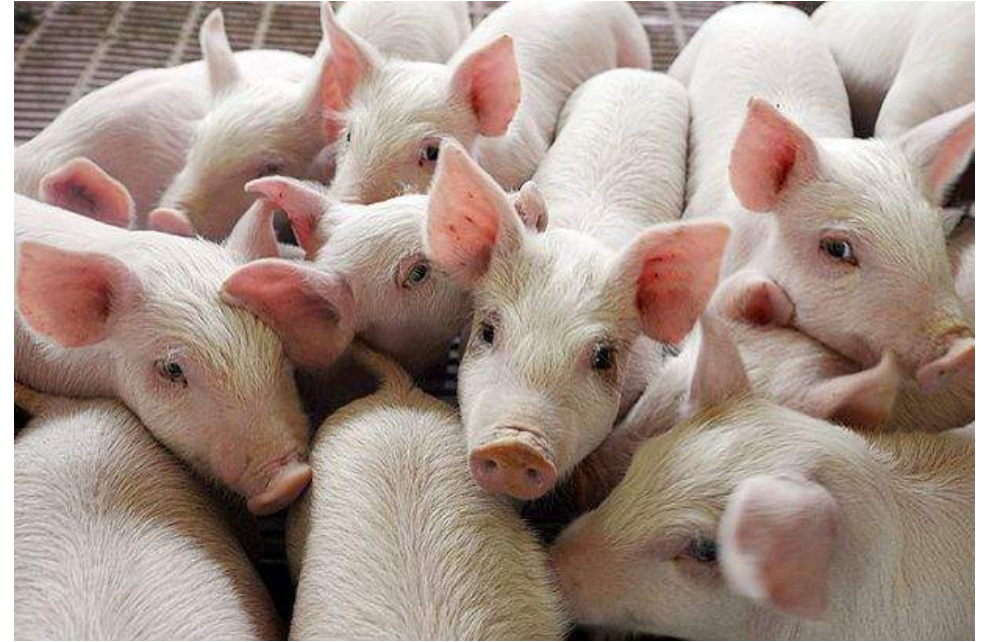
LINKING THE CHAIN





GROUP LEVEL DATA

- Early-warning system
→ 4 test farms + ILVO



- Business Intelligence Dashboard
 - Incl. warnings, predictions, ...
 - Based on available (sensor) data and farm characteristics
 - Climate, feed, water, weight, production,...



INDIVIDUAL LEVEL DATA

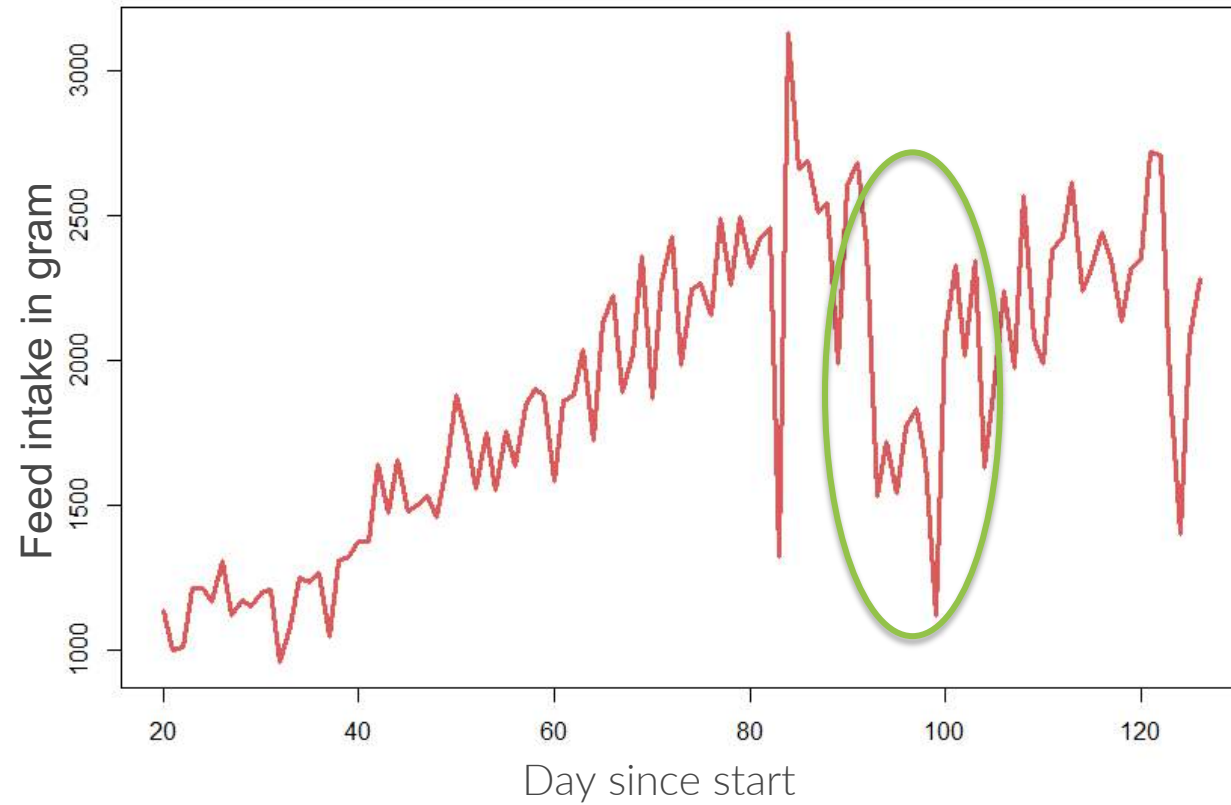
- ILVO barn: Early-warning system on individual level
 - Electronic identification + sensors



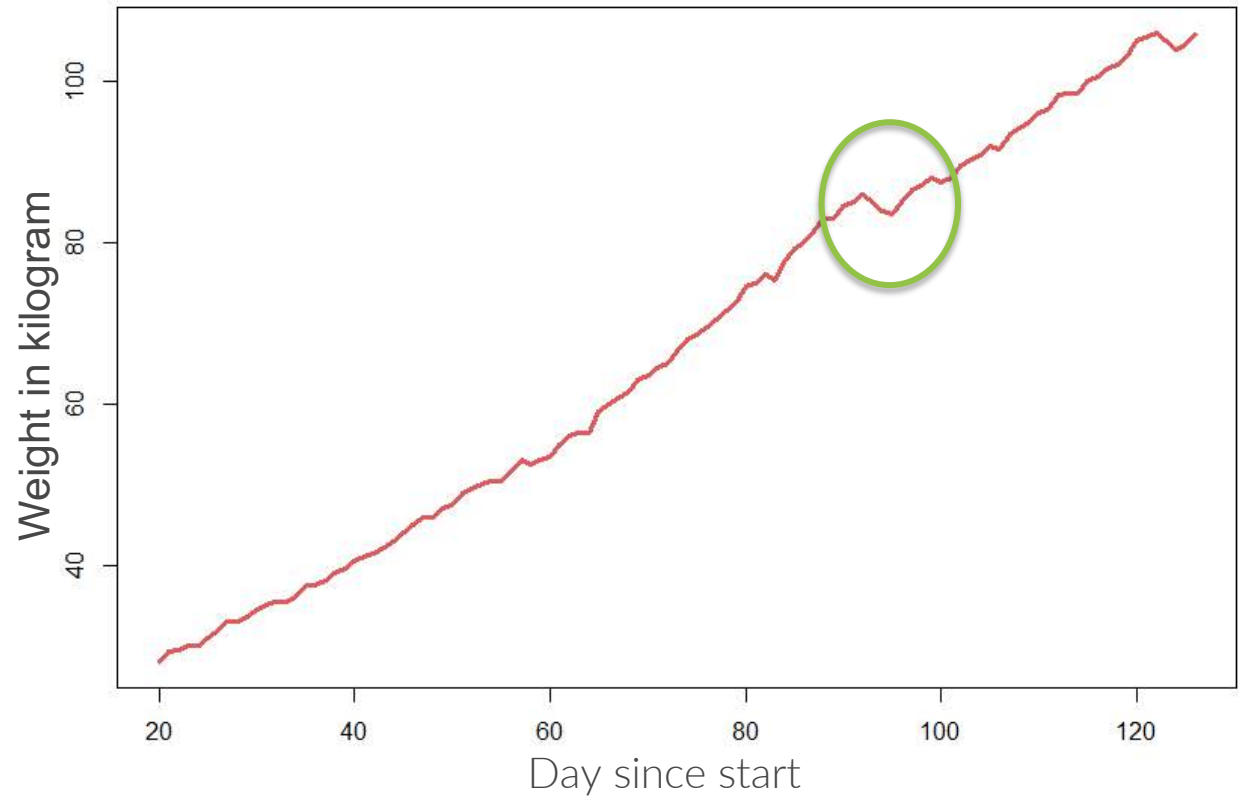


AN INDIVIDUAL PIG

Daily feed intake



Weight



=> **Swelling + lame hind end (recurrent problem)**



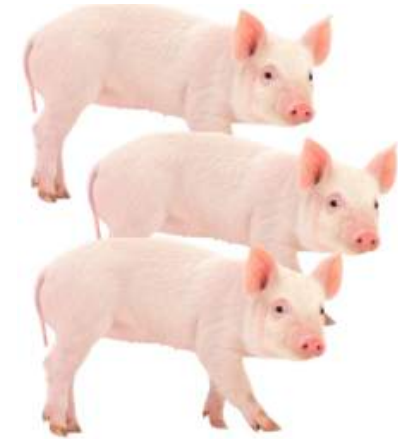
INDIVIDUAL LEVEL DASHBOARD





CURRENT STATUS

- Group level data:
 - First version of the dashboard by summer 2018
 - Still looking for farmers (conventional + organic)
- Individual level data:
 - Test round finished in February 2018
 - Second round started in April 2018
 - Ongoing: including and validating warnings



OPEN CALL 'NEW INNOVATIVE IOT USE CASES'

Challenges

1. New regions

- Eastern and Northern Europe
- Re-use existing use cases

2. Post-farm and other sectors

- From farm → supply chain (logistics, processing, retail, consumption)
- Other crops, animals, etc.

Important Information

- Multi-actor use cases (no single-parties!)
- IoT value chain (tech providers, service integrators, end-users)
- Business/organizational aspects
- Total budget: 6 M€; per use case 300-500 k€
- Expected opening: June 2018
- See: www.iof2020.eu/opencall

THANKS FOR YOUR ATTENTION!

QUESTIONS?

CONTACT INFORMATION

Chari Vandenbussche
chari.vandenbussche@ilvo.vlaanderen.be

Jürgen Vangeyte
jurgen.vangeyte@ilvo.vlaanderen.be



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