

# Data Driven Dairy Decisions for Farmers

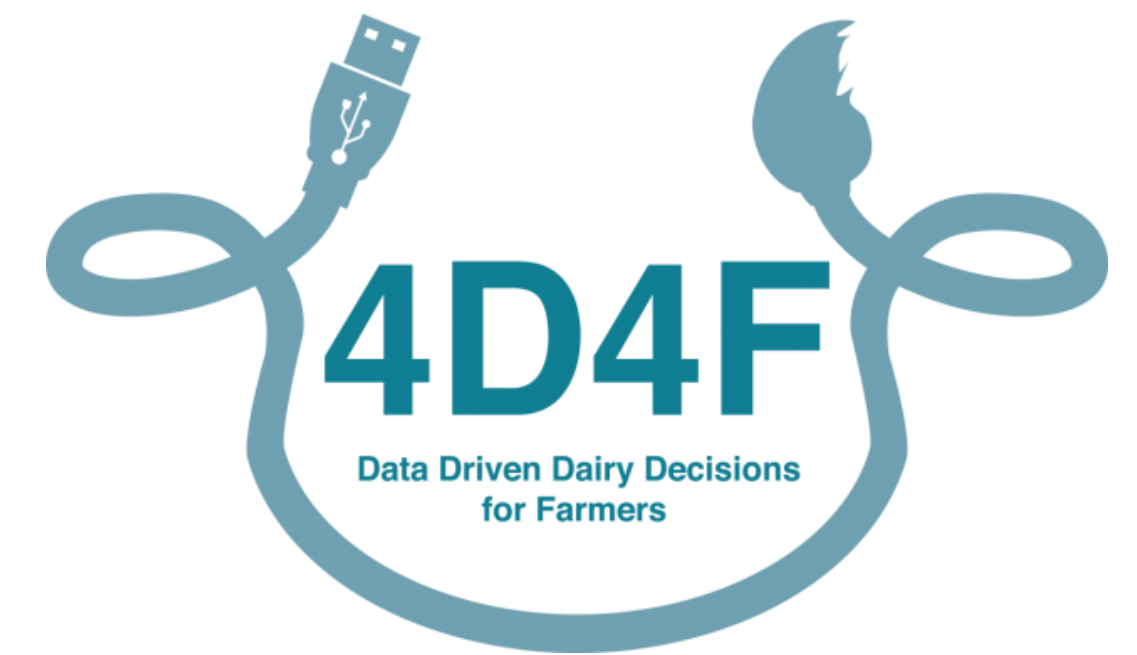
**Baiba Rivza , Latvia University of Agriculture**

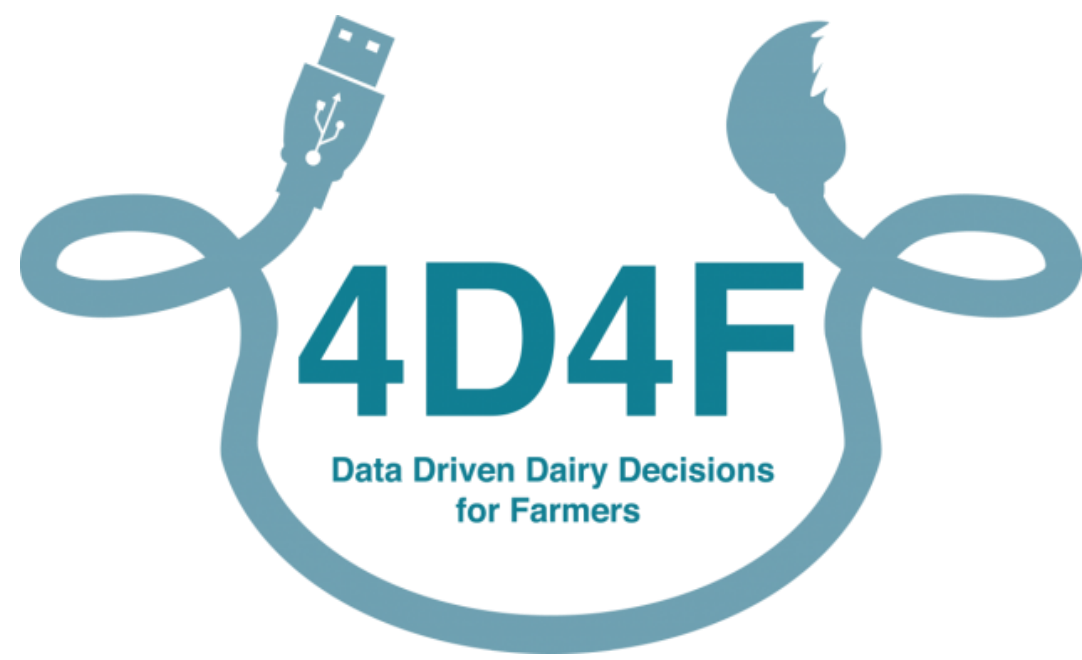
**" The 2017 EU Agricultural Outlook Conference " Food and farming  
Brussels, 18 and 19 December 2017**



# Data Driven Dairy Decisions for Farmers (4D4F, 2016-2019)

- The project is aimed to the use of smart technologies and use of collected data in modern dairy cow and goat farming.
- The main goal is to develop physical and virtual networks to support and improve Data Driven Decisions on dairy farms
- The development of Community of Practice (COP) that is comprised of farmers, farm advisors, technology suppliers, knowledge exchange professionals and researchers.





# Our Consortium

1. 16 Partners
2. Pan-European
3. 2 Farmer Organisations
4. 2 Academies
5. 6 Research Institutes
6. 6 Commercial Companies



# The importance of sensor technologies

- Sensor technologies are used in dairy farming to electronically monitor livestock, their environment, and to collect real-time data to make more informed decisions, to improve the quality of farmers life.
- Currently there are several sensors which are being used in a number of dairy farms across Europe and other countries.

Type of Sensor	Measuring
Movement Sensors	Activity
Milk Analysis	Lactate Dehydrogenase Somatic cell count
pH	Rumen pH
Positioning	Cow behaviour
Cameras	Heat Body form
Thermometer	Temperature
Pressure	Locomotion



# Materials and methods



- A questionnaire was used to gather data from farmers, vets, researchers and farm advisors from the 4D4F partner countries.
- In questionnaire was included questions about their:
  - **previous experience** with sensor technologies;
  - **opinion of the benefits** of sensor technologies;
  - **experienced** sensor technology **disadvantages**;
  - **Suggestions** for possible system improvements.
- In presentation are included the suggestions for the sensor technologie development from farmer questionnaires.





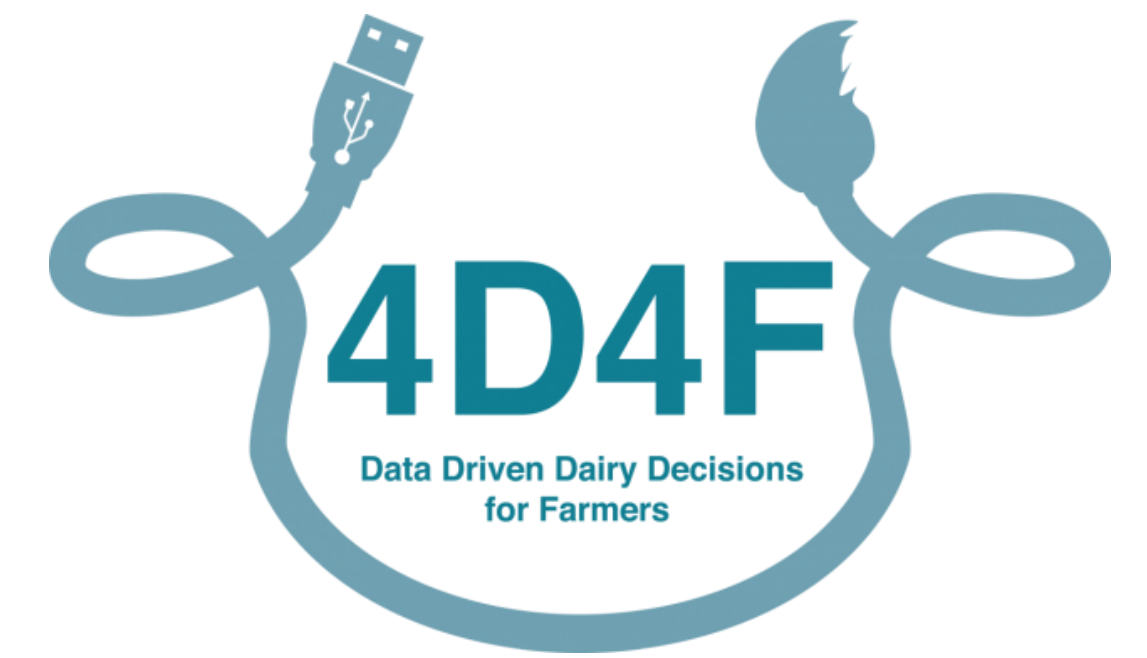
# Key findings

The areas identified by the majority of respondents as core and require a solution were:

**lameness, udder health, metabolic diseases, nutrition and reproduction.**

- Most respondents reported to have experience in more than one sensor while pressure sensor were least common on farms.
- There is need for wide spectrum sensors - those which can capture multiple dairy cow health issues.
- There is need to simplifying data for easy understanding to enable prompt action.

# Network



## Planned networking results at the end of project:

- Community of practice;
- Best practice guides supported by;
  - Videos,
  - Infographics,
  - Online virtual warehouse;
- Identified research priorities;
- Standard operation procedures;
- Workshops and events.





# Case study from Latvia: *Latvian University of Agriculture study and research farm "Vecauce"*

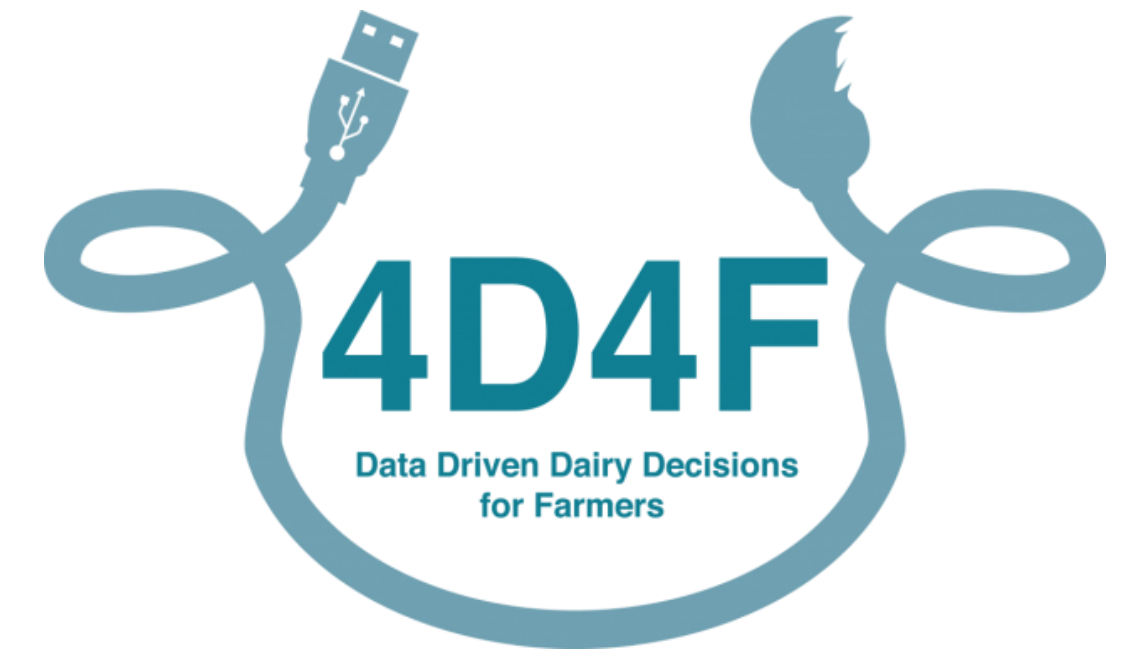


- In Vecauce farm are located 632 dairy cows
- In the voluntary milking group are included 104 Holstein Black and White breed cows. In this group are used: **milking robots, automated feed stations, body condition scoring camera, step counters.**
- The technologies, installed in farm, not only helps to improve production, reproduction and welfare of dairy cows, **but also allows to introduce dairy sensors to students**
- With the introduction of sensor technologies **increased average milk productivity from 8105 kg up until 10 741 kg** and cases of metabolic diseases reduced by **43%**.



# More information about project activities in:

- <http://4d4f.eu/>
- [@4d4fproject](https://www.facebook.com/4D4Fproject/)
- <https://www.facebook.com/4D4Fproject/>
- Find out more about 4D4F thematic network in this video: <https://www.youtube.com/watch?v=9OR0Zk5EQyY>





Thank you for your attention!