Nov 9, 2020

Precision livestock farming. Overview of current situation.

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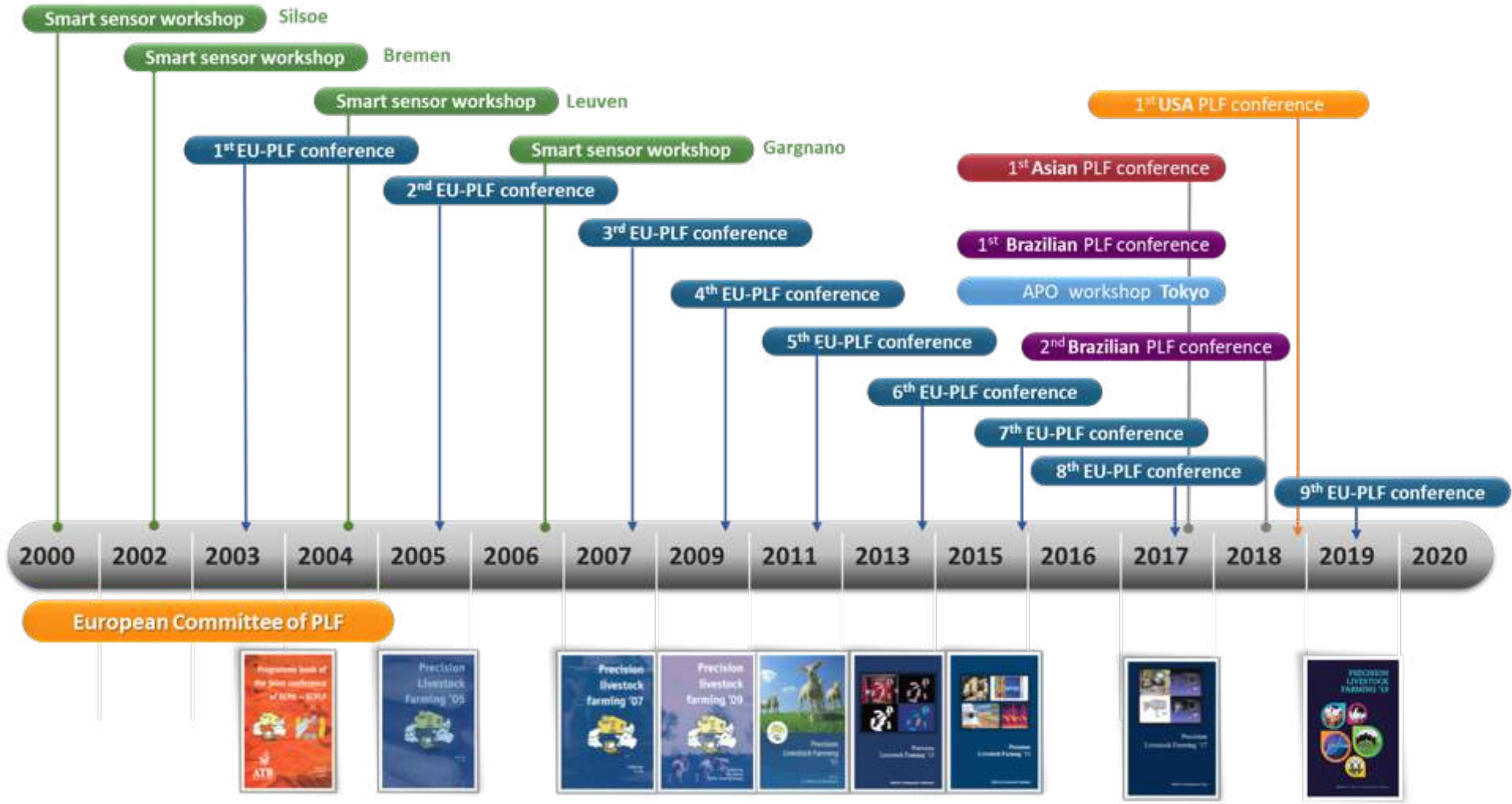
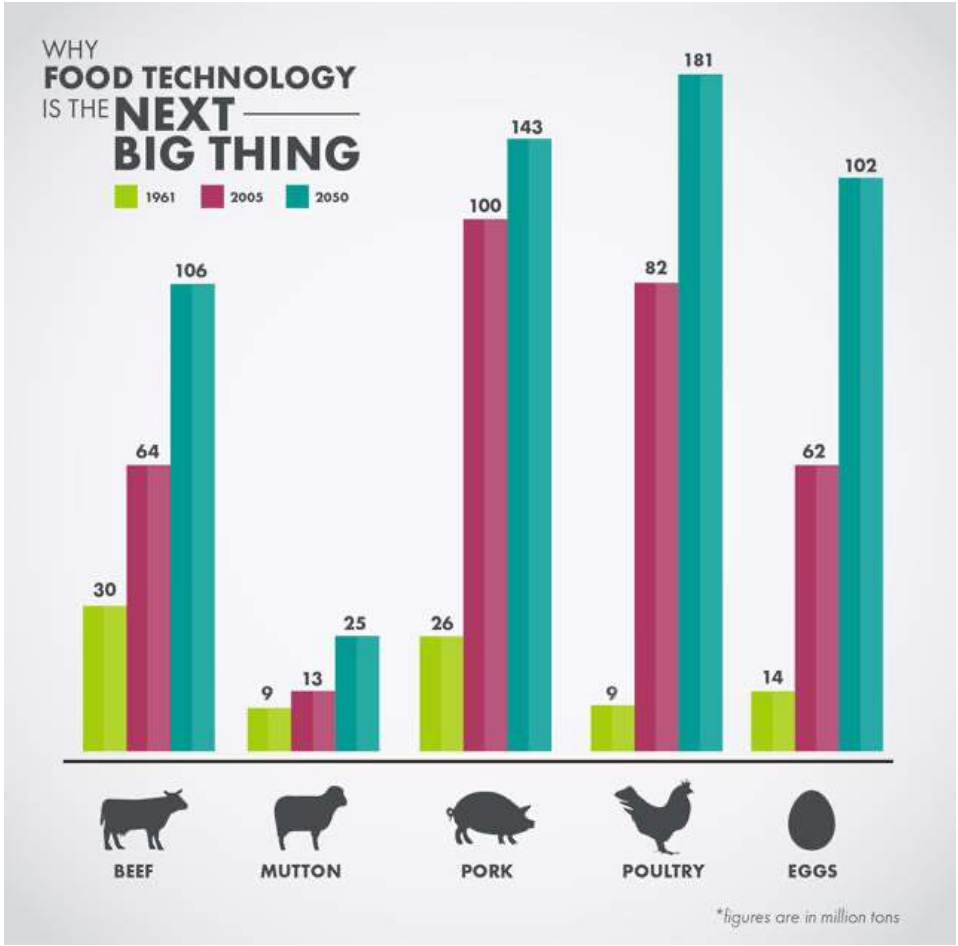
How recently PLF has born



World population trend

1950	2000	2050
2.6 billions	6 billions	9.6 billions

Food demand trend



Precision Livestock Farming: why?

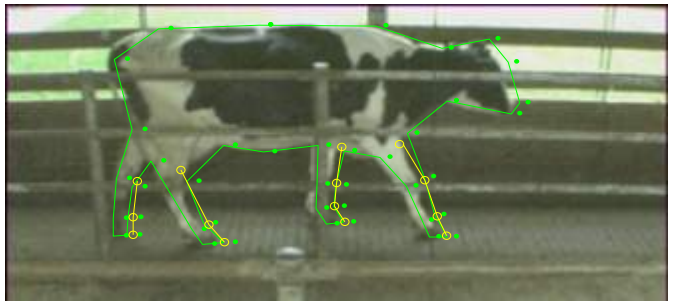
Livestock farming in the past …

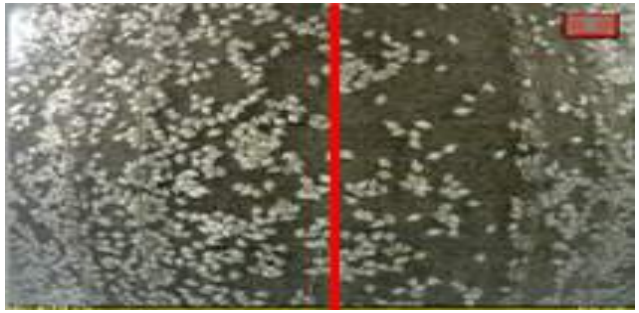
Farmer had the time to control his animals

Nowadays:

Need of new technologies to optimize and improve farming conditions, both for farmers and animals

Precision Livestock Farming: what?





Management of livestock by continuous automated real-time monitoring of production/reproduction, health and welfare of livestock and environmental impact.

Basic principles of PLF:

Living organisms are...

Basic principles of PLF:

…Individually different!

Basic principles of PLF:

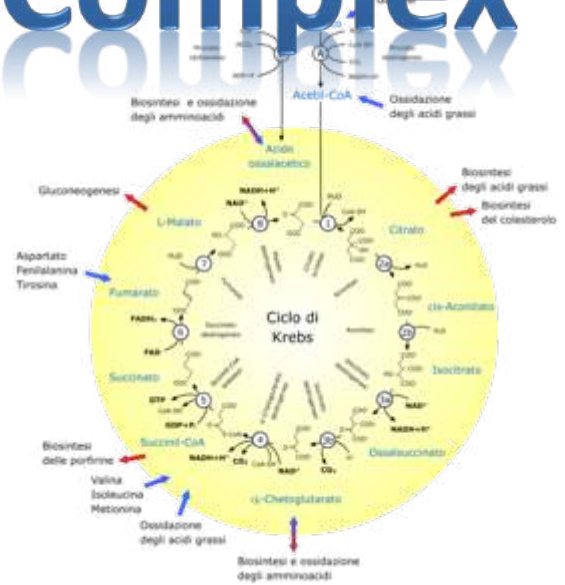
Living organisms are crucially important:

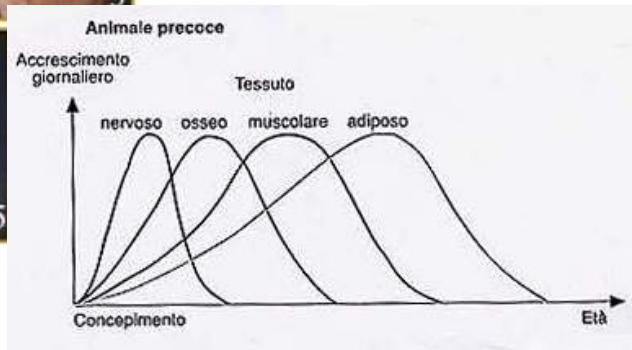
THEY ARE

Individual

Dynamic/Time-varying

Complex





Precision Livestock Farming: how? Tools and sensors

Microphones

Videocameras

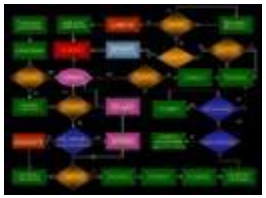
Accelerometers

Data loggers

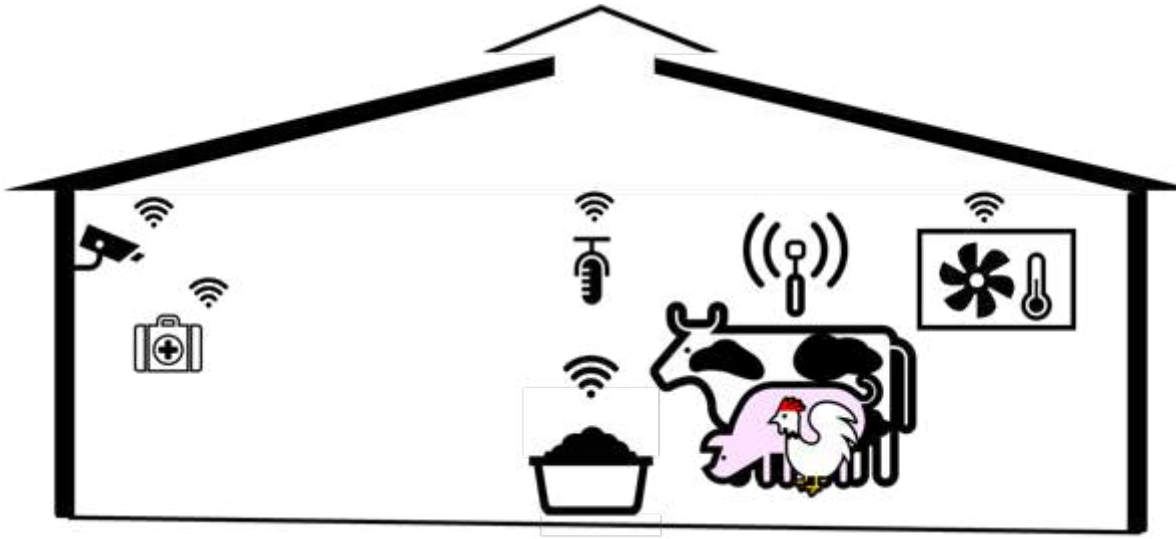
Pression sensors

Thermocameras

Algorithms



How a barn looks like…



Advantages of PLF technology

Objective measurements

Fully automated

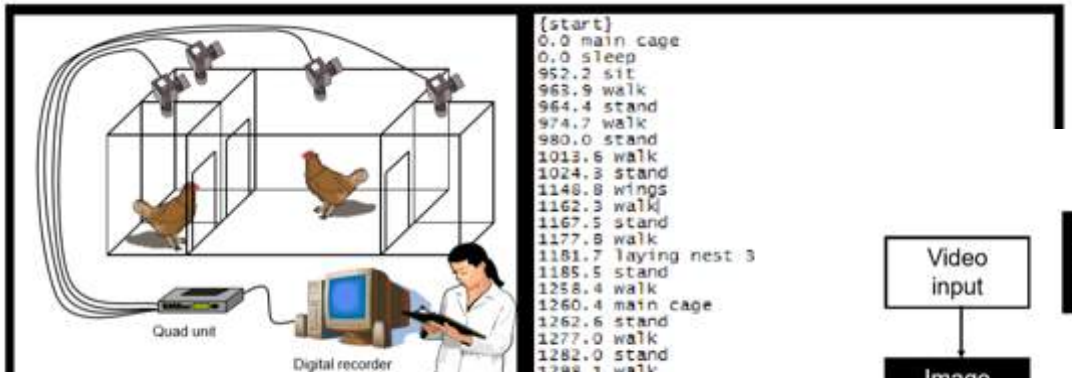
Continuous

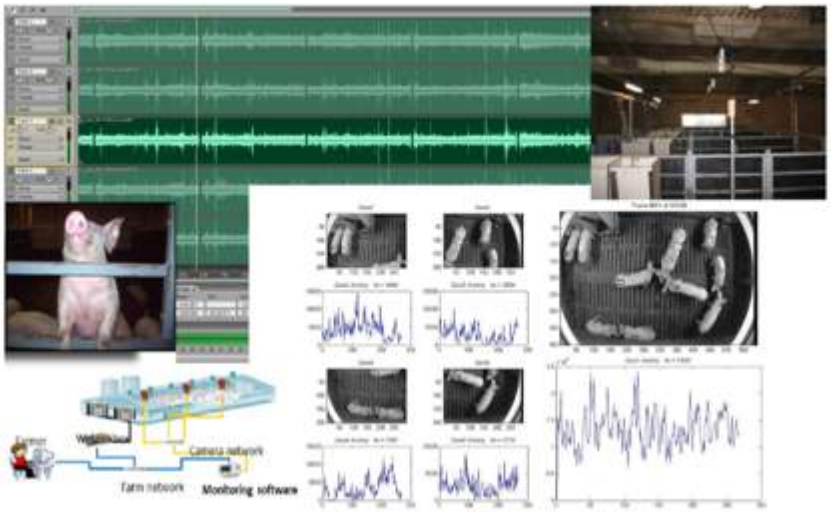
Behavioral responses of animals

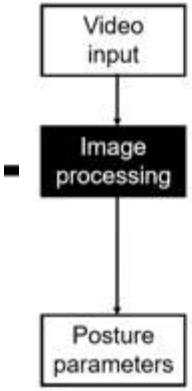
Less visits to the animals

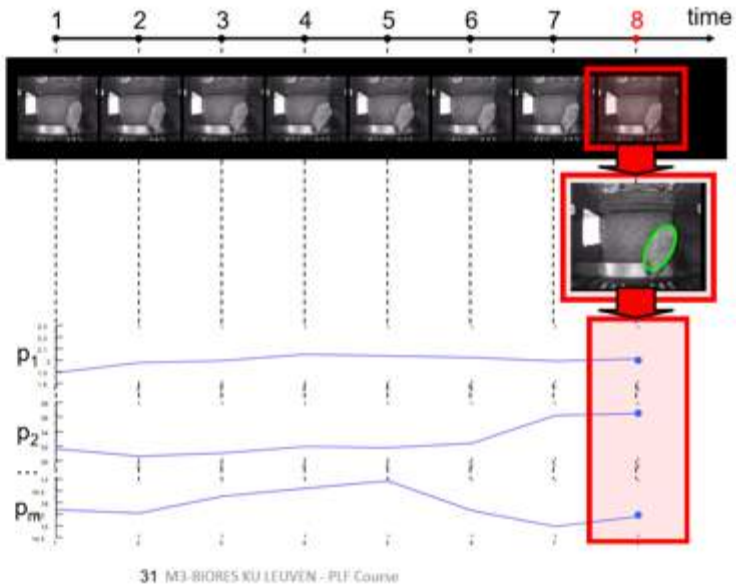
From labelling to on line monitoring

Videocameras









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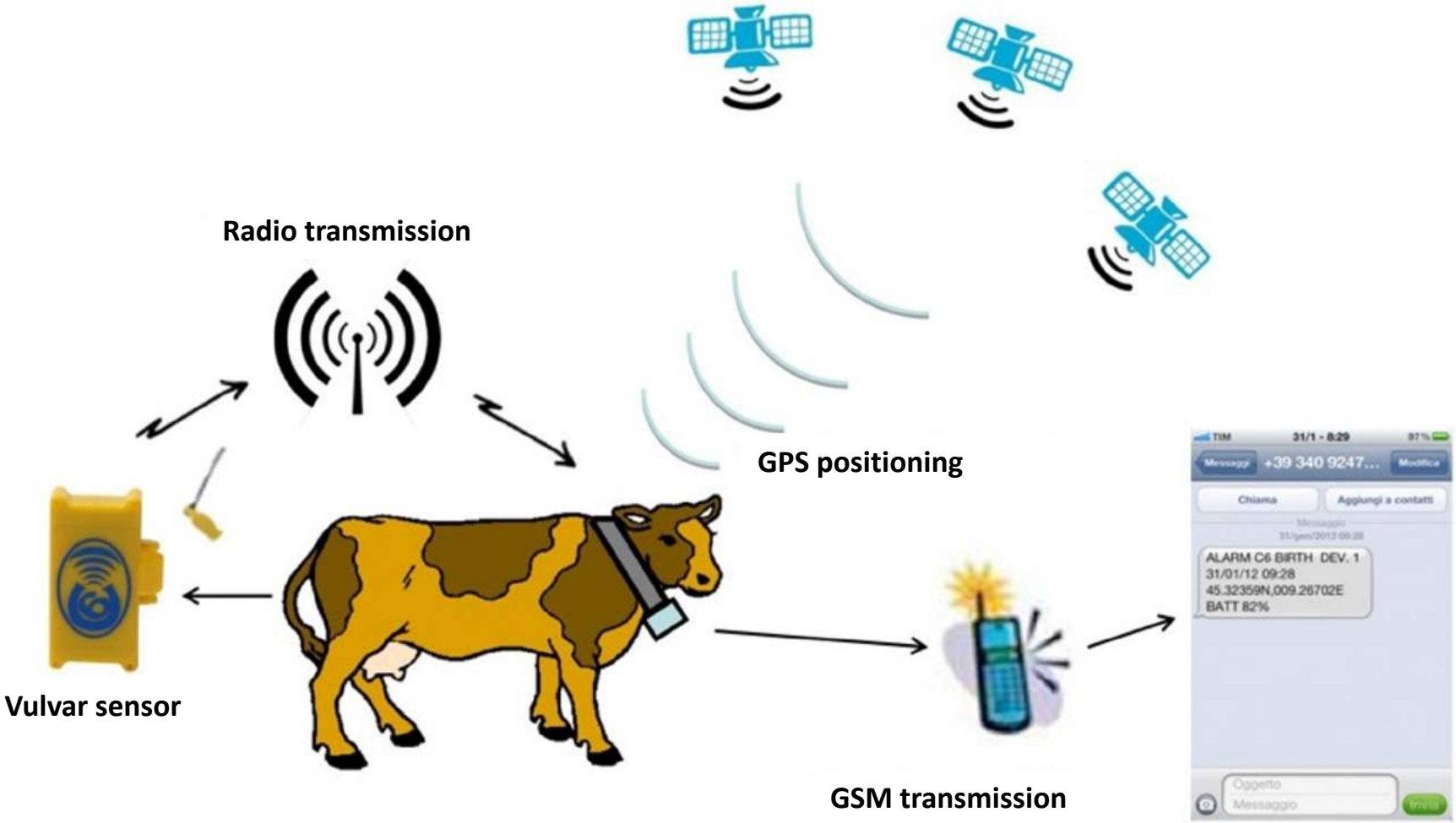
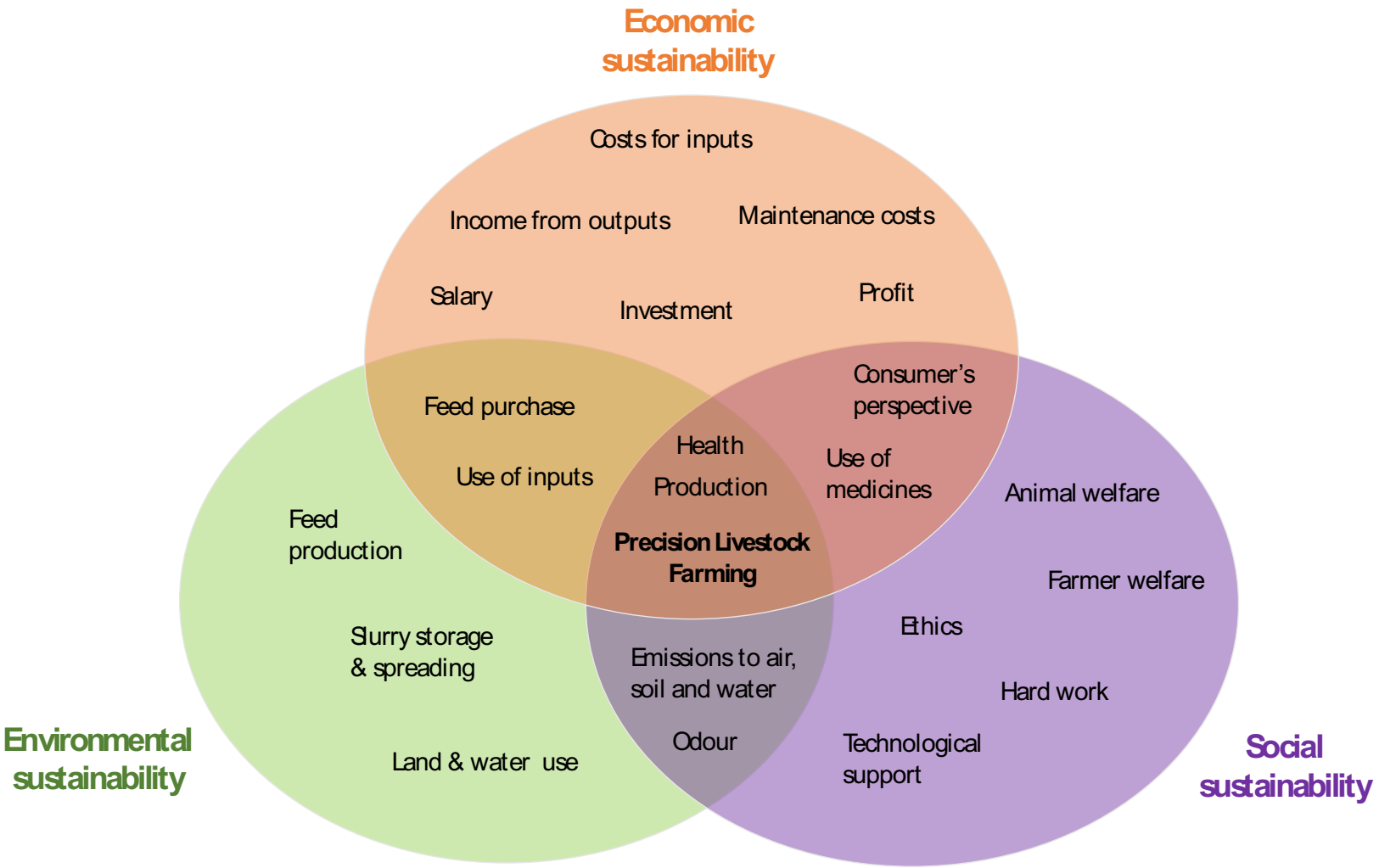
Images by: Daniel Berckmans, PLF Conference 2015

PLF for extensive farming



PLF for sustainability



What are the next steps to follow: FROM FARM TO FORK

The action **“From farm to fork”** is focusing on food production by:

- assuring healthy, affordable and sustainable food to Europeans
- tackle climate change
- protect the environment
- preserve biodiversity, allow fair economic returns
- increase organic farming

Conclusions

- PLF Systems work in real farms, PLF technology will go
- PLF creates Big Data, they cannot all be stored
- Data are difficult to interpret, PLF = Tool
- Automated alarms need farmers' actions to create value!

Conclusions

- Farmers need information and training
- Business models must be tested in the market
- Important role for farmers'organisations
- Real collaborations between research disciplines are needed, + farmers and + industry!

European Association of Precision Livestock Farming
WWW.EA-PLF.EU

The next conference – Vienna August 2021

Thank you