

# An early warning decision support system for disease outbreaks in the livestock sector

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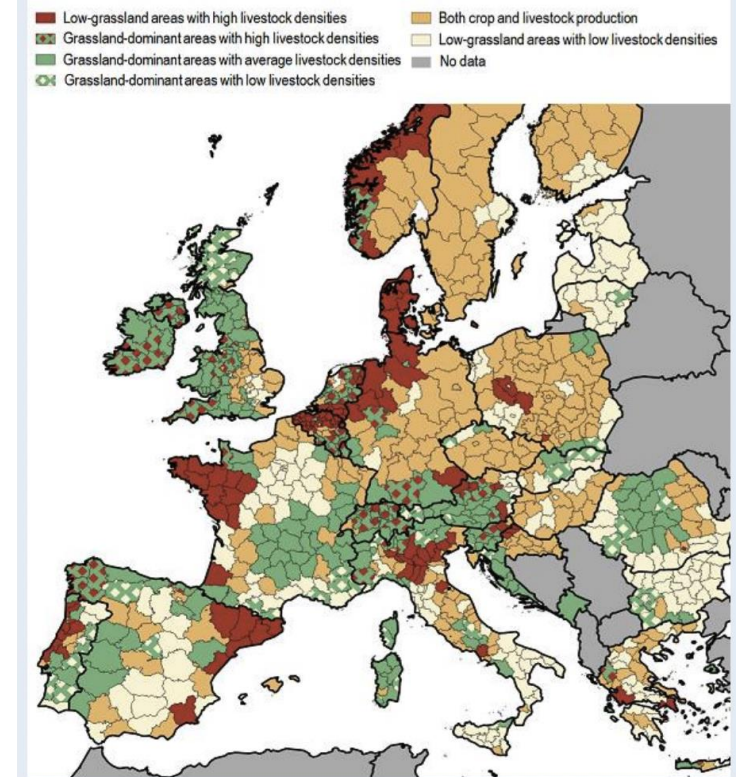
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# The importance of the livestock sector



Typology of European livestock production areas  
(Source: INRA based on Eurostat, 2010)



The livestock sector in 2017:

- 168€ billion annually
- 45% of the EU agricultural activity
- Wide diversity of production system
- 4 million of employees
- 400€ billion European industries linked to animal production

*Animal Task Force (ATF. 2017a)*

*Why is European animal production important today? Facts and figures*

## Stress

[stres] noun

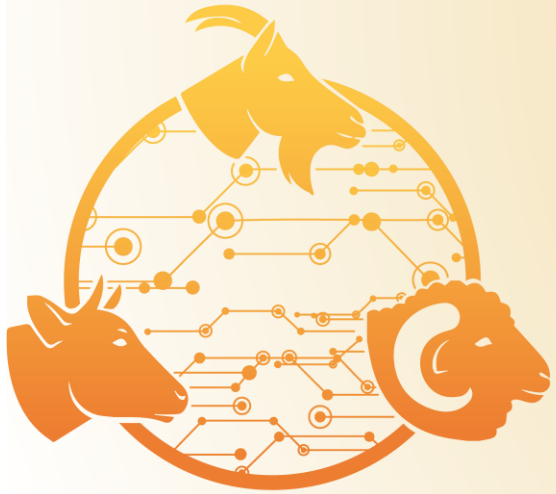
Biological response elicited by the organism when perceiving a threat (stressor) to its homeostasis.



Animal wellbeing, production and reproduction, diseases and their spread, food quality and availability



# SEBASTIEN project



Smarter livestock  
Breeding through  
Advanced Services  
Tailoring Innovative  
and multi-source  
data to users' Needs

SEBASTIEN provides an *early warning* **Decision Support System** for more efficient and sustainable management of the livestock sector.



# Some figures...



45  
Goat Breeds



54  
Sheep Breeds



67  
Cattle Breeds



1  
Buffalo Breed



3194146  
Monitored Animals



30507  
Farms



49675403  
Acquired Data



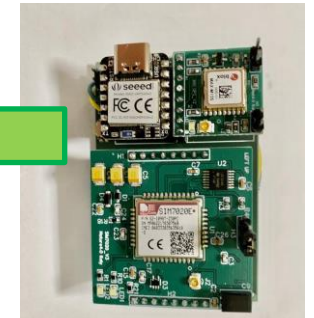
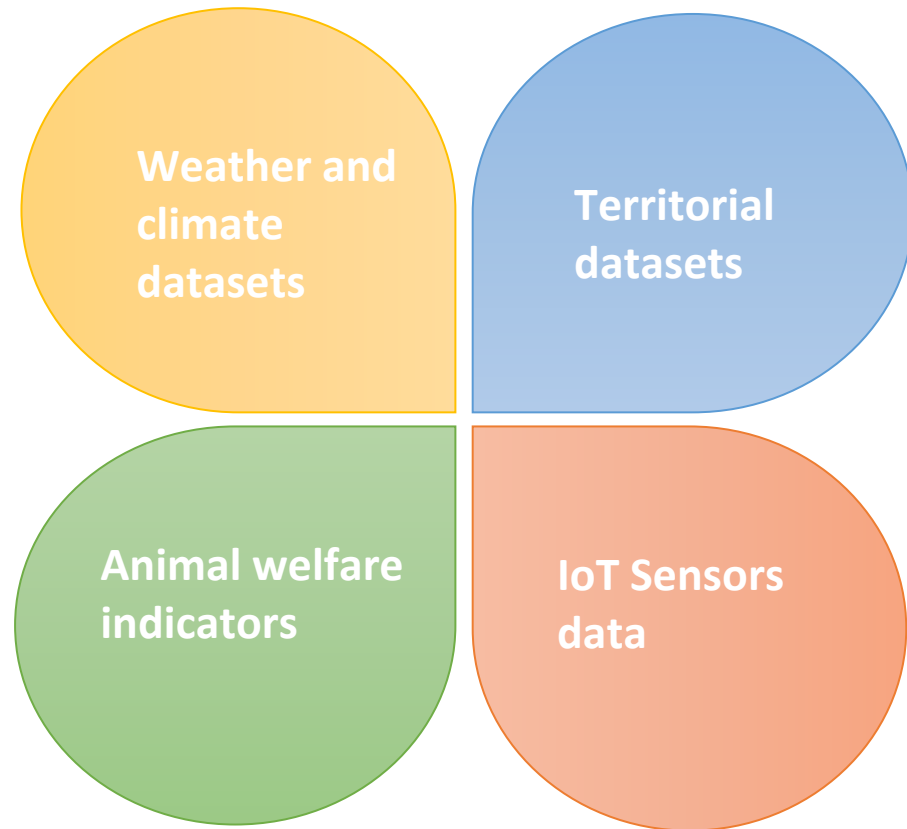
51702841  
Acquired Analysis



12733758  
Samples Gathered



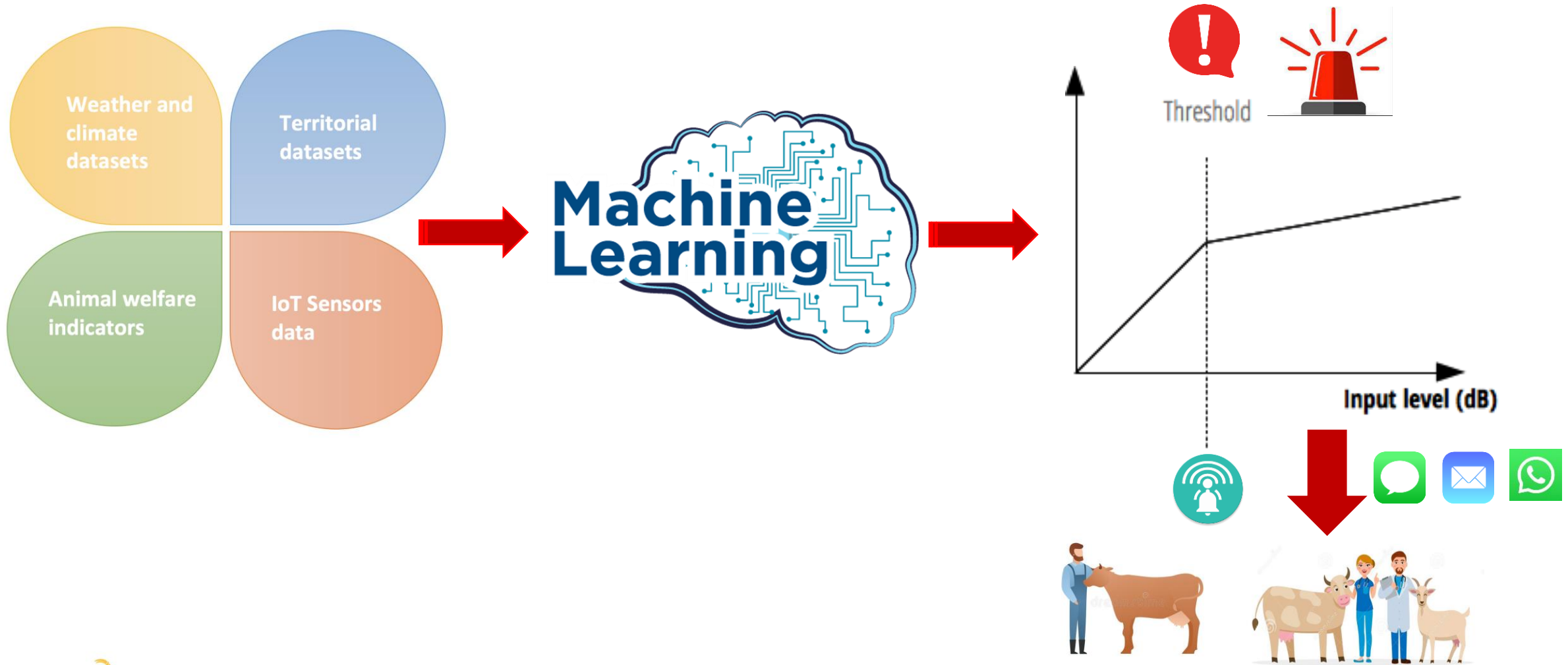
# Data sources for early warning system



Environmental temperature and humidity + GPS + movement



# Early warning system



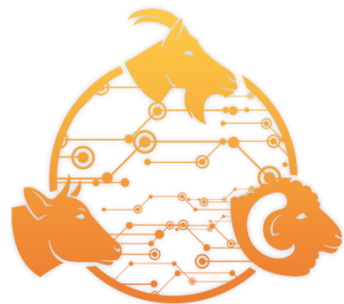
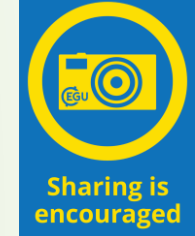
# SEBASTIEN video teaser



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# Thank you!



## SEBASTIEN



CINECA



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**Total CEF Contribution:** € 1.003.914,89

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