

REAMIT Networking Symposium

9th January 2020
Crowne Plaza Nottingham, UK



LEVSTONE



WHYSOR



SenX



Valorial
ORDRES L'ALIMENT PLUS INTELLIGENT



William Duffy
Ulster University

Environmental sensors as an indicator
of meat quality in cattle: A pilot study

Interreg 
EUROPEAN UNION

North-West Europe

REAMIT

European Regional Development Fund



Interreg 
EUROPEAN UNION

North-West Europe

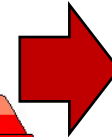
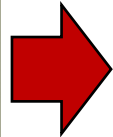
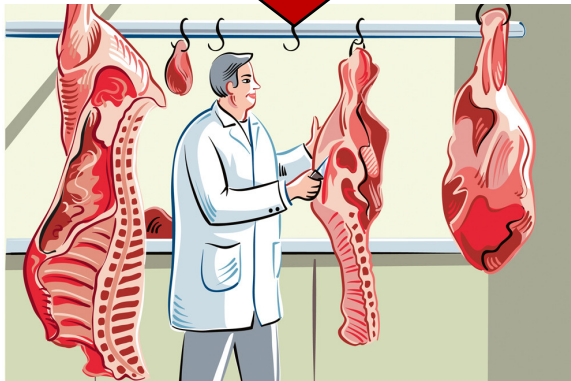
REAMIT

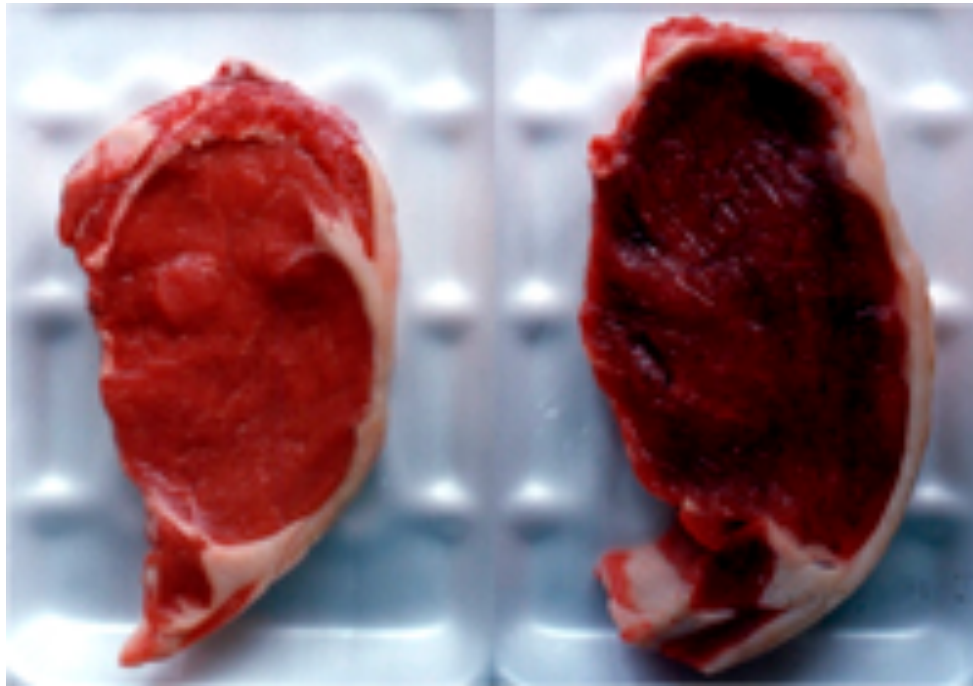
European Regional Development Fund

The problem



Supply chain waste





Meat Quality

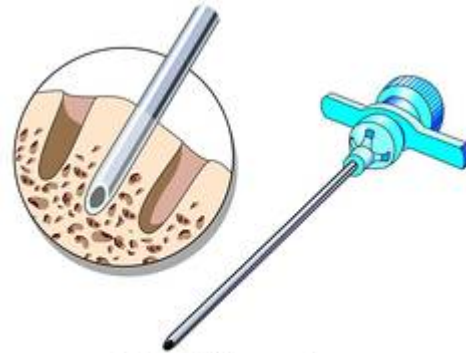
Dark-cutter beef



Dark-cutter beef causes

On-farm causes	Off-farm factors
Nutrition	Marketing conditions
Hormones	Transportation
Gender	Management
Age	Stunning
Season	
Human-animal interaction	

Poor quality meat indicators



Aims and objectives

- *Sensor discovery and procurement*
 - *Install and gather data*
- *Gather objective measures of meat quality*
 - *Perform analysis on data*

Environmental Sensing

- Volatile organic compounds
 - CO₂
- Temperature





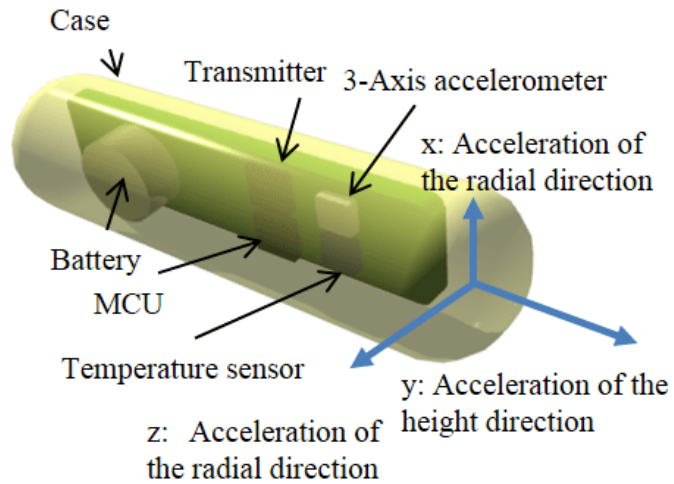
Data logistics



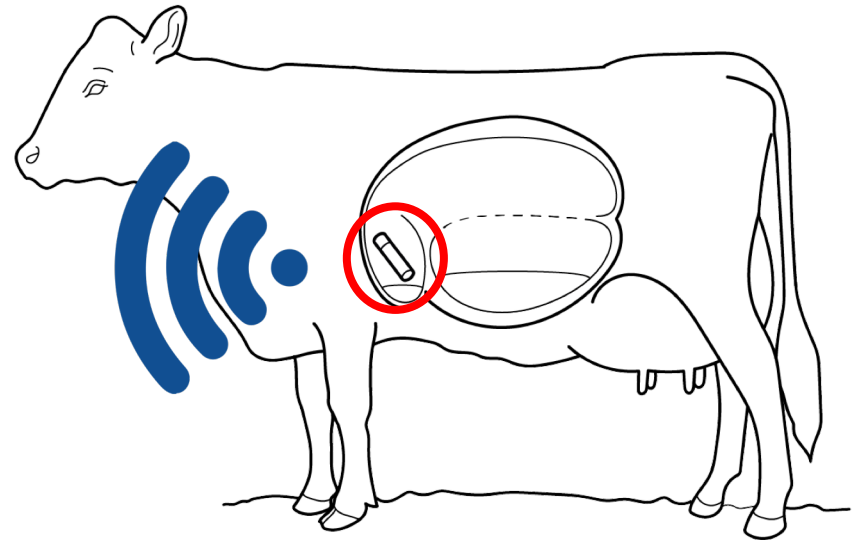


Wearable sensors



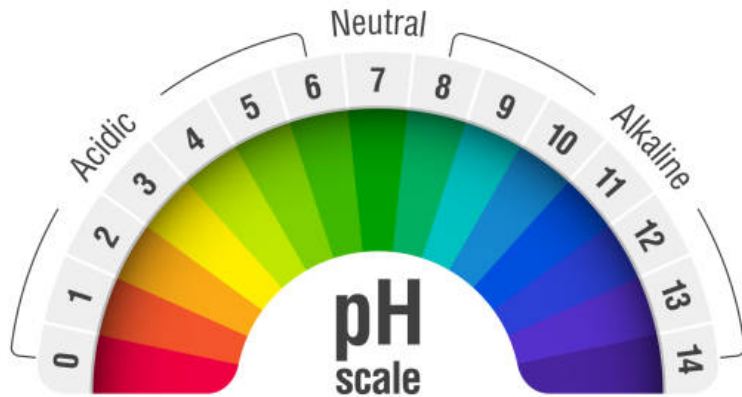


Bolus sensors

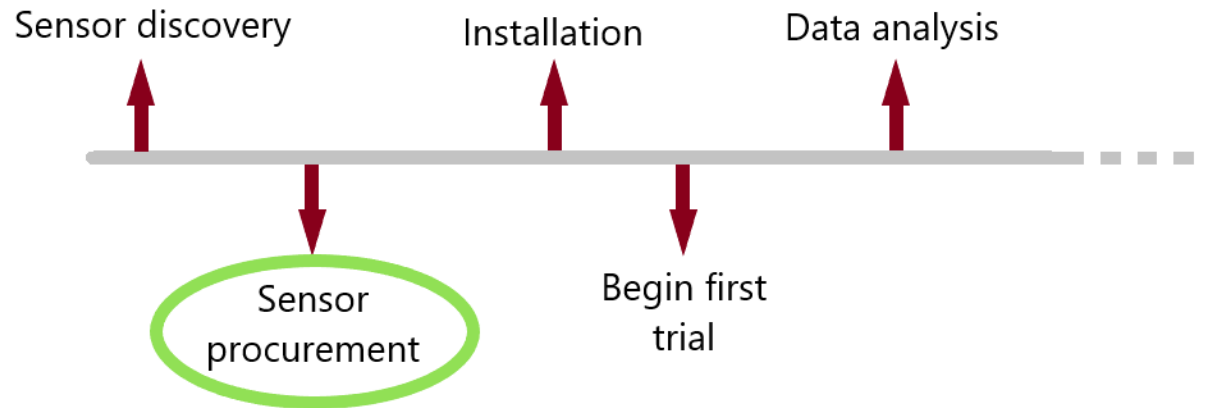


Validation

- Classification of dark-cutter



Timeline



Conclusion

- *Sensors*
- *Meat quality*

Next Steps