



# PigSys – Improving pig system performance through a whole system approach

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1<sup>ST</sup> SusAn COFUNDED Projects Seminar 23-24 November 2017, Bilboa (BC, ES)

#### **EUROPEAN RESEARCH AREA ON SUSTAINABLE ANIMAL PRODUCTION**





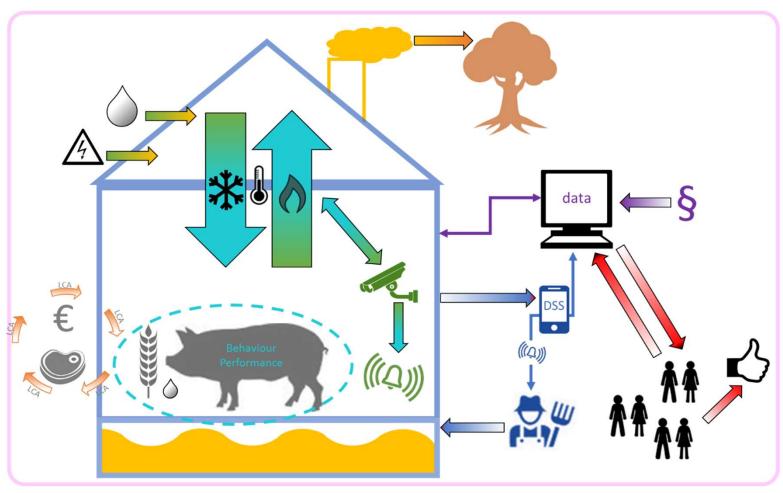
### Challenges

- Need for increase of resource efficiency
- Need for reduction of emissions
- High level of animal welfare is not secured
  - Lack of linkage between animal performance and other production factors
  - Standard climate settings do not incorporate animal status
    - Simple temperature set point
    - In rare occasions NH<sub>3</sub>, CO<sub>2</sub>
- Need for adaption to climate change
  - Increase of extreme weather conditions
- Data ownership and safety
  - Usually owned by technology providers
  - Big Data requires cloud storage and processing





## Goal/Objective







#### Consortium













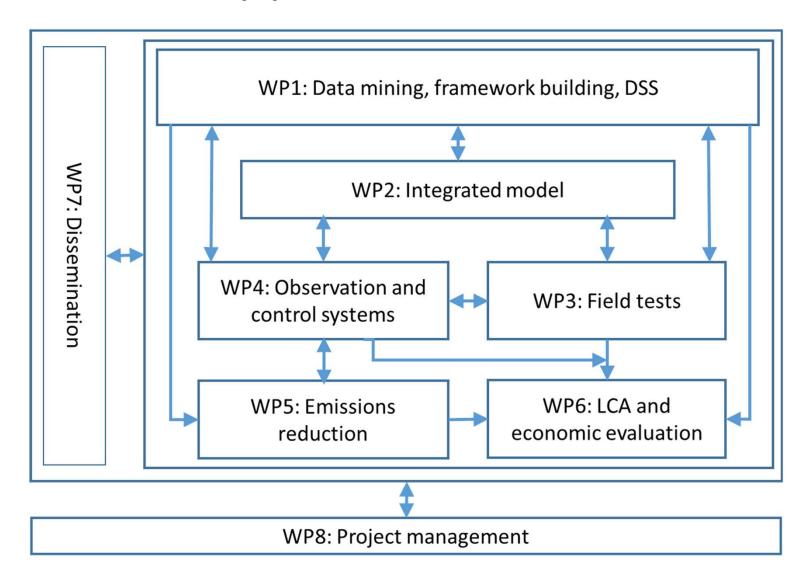








## Research Approach





#### Potential Impact

- Increased production performance
  - Increased resource efficiency
  - Decreased system emissions
  - Increased animal performance and welfare
- Marketable products
  - Unified data management system
  - Decision support system
    - Integrated animal-building models
  - Measurement and control systems
    - Monitoring of animal behaviour
    - Improved environmental control





#### Potential Impact cont'ed

- Deeper understanding of co-dependencies
  - Animal Environmental Conditions Sustainability
    - Deep learning
- Increased awareness around data issues
- Increase of profitability
- Improvement of public perception



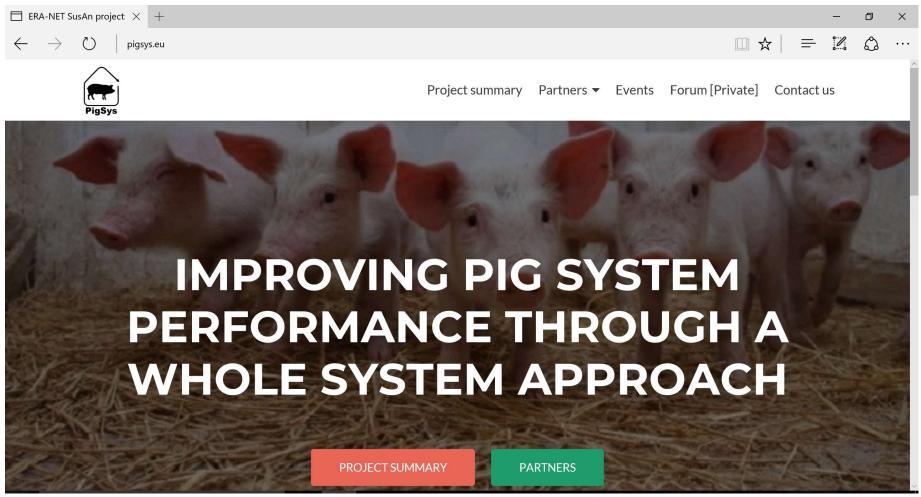


### Stakeholders and Expectations

- Farmers
  - Access to historical and new production data
  - Co-development of systems
    - DSS
    - Models
  - Test of control systems
- Technology providers
  - Advice on implementation
- Associations
  - Dissemination of results to the members
  - Advice on needs of the market
- Consumers



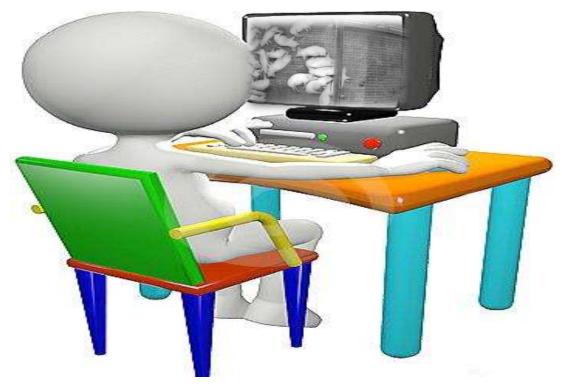








#### Thank You!



Questions?

