Internet of Animal Health Things (IoAHT)– Opportunities and Challenges

Whitepaper Discussion

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Introduction

- A brief introduction to the collaboration between Cambridge and Zoetis in this Whitepaper

- Introduce the paper and authors
  - Daniel Smith Senior Director Business Technology Zoetis
  - Scott Lyle Director for the Centre of Digital Innovation Zoetis
  - Provide brief introduction to Zoetis

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Evolving Precision Farming in the era of IoT
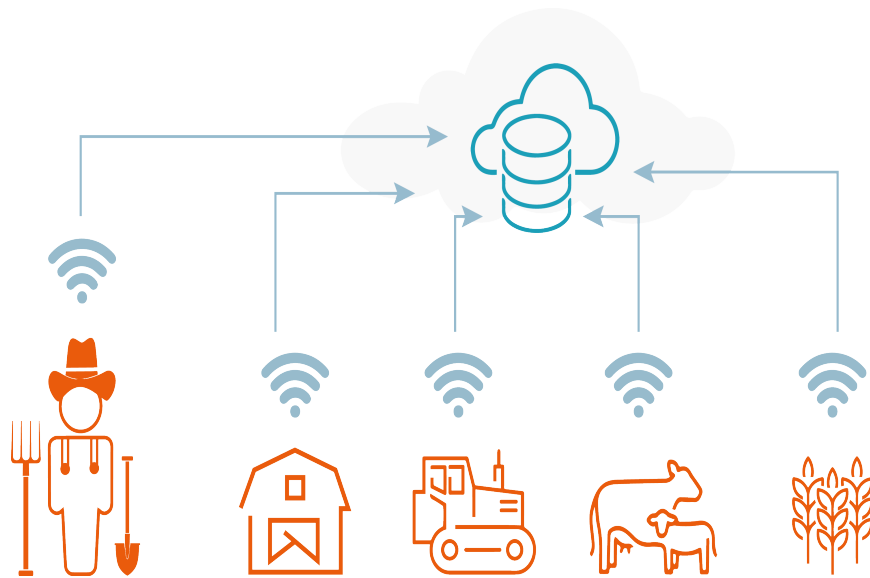
- Major Trends in Information Technology

- Mobile revolutionizing business creating a network of connected "things"

- Recording farm data manual and difficult task to do on the go

- Number of sensors shipped 4.2b 2012 / 23.6b 2014)

- Farmer practices are transition into precision farming

- Exploring the use and applications of IoT

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Precision Livestock Farming Key Components
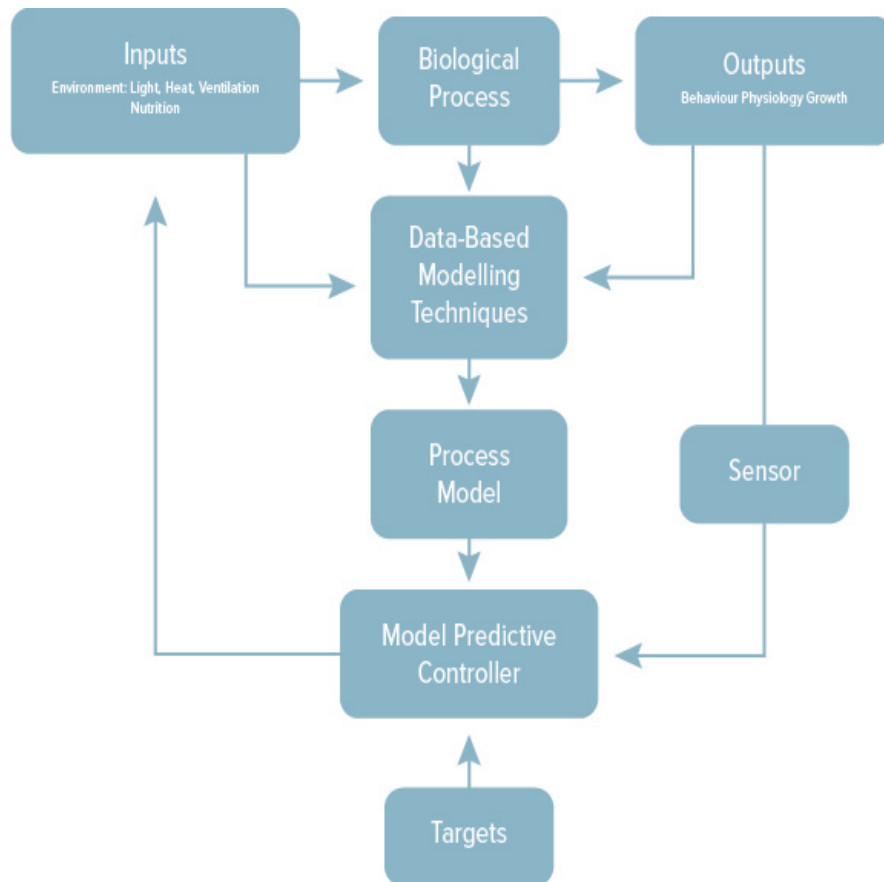
- IoT and digital products now seamlessly integrated into core activities

- Digital products are creating billions of "touch points"

- Moving beyond privacy policy

- Provide real control over data with customer choice

- It should be apparent in the product experience

- Use only what is required for the digital product to work, and no more

- "Give to get"
  - Key learnings
  - Trend lines
  - New insights

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Data-Driven Business Model

Third Party Involvement Issues

Data Erasure Issues

Data Collection Issues

1 Target Outcome

Using big data to improve the PLF process management and for targeted delivery of drugs to individual animals.

4 Key Offering

Data acquisition: Capturing and recording multiple attributes of each animal such as age, pedigree, growth rates, etc.

Aggregation: Integrate data from different devices.

Descriptive analytics: Temporal trend analysis, for example, monitor animals' size and weight gain.

Predictive analytics: Predict the estimated real-time process output.

Prescriptive analytics: Enable interventions to ensure target trajectory is met.

5 Revenue Model

Potential revenue streams include usage fees, purchase of sensor devices, subscription fees. Data use may support other business core products providing market insight.

2 Offering

Data: Continuous sensing of outputs (process responses) at appropriate scale and frequency, with data fed back to the process controller.

Information: A target value and trajectory for each process output such as growth rates, behaviour patterns.

Knowledge: Actuators and a predictive controller for the process inputs.

3 Data Source

Internal: Batch data collected by sensor devices such as herd/flock camera systems, automatic weighing devices, vocalisation monitors, cough monitors, electronic identification ear tags (EID) and pedometers.

External: Data obtained from collaboration with related parties, for example, feed manufacturers working with weight-monitoring PLF companies.

Consent Quality Issues

User Access and Control Issues

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