

Towards an open development environment for recording and analysis of dairy farm data

30-05-2012, Bert Ipema



Contents

- Introduction
- State of the art information exchange
 - Intra-enterprise integration
 - Inter-enterprise integration
- Integration issues
- Recommendations for new project initiatives



Introduction

- In depth analysis agriXchange – EU funded CSA project
 - In field situation
 - Developments
 - Current issues
- Future challenges for Smart Dairy Farming project



State of the art: Intra-enterprise integration

- Electronic identification
 - State of the art developments



Individual approach



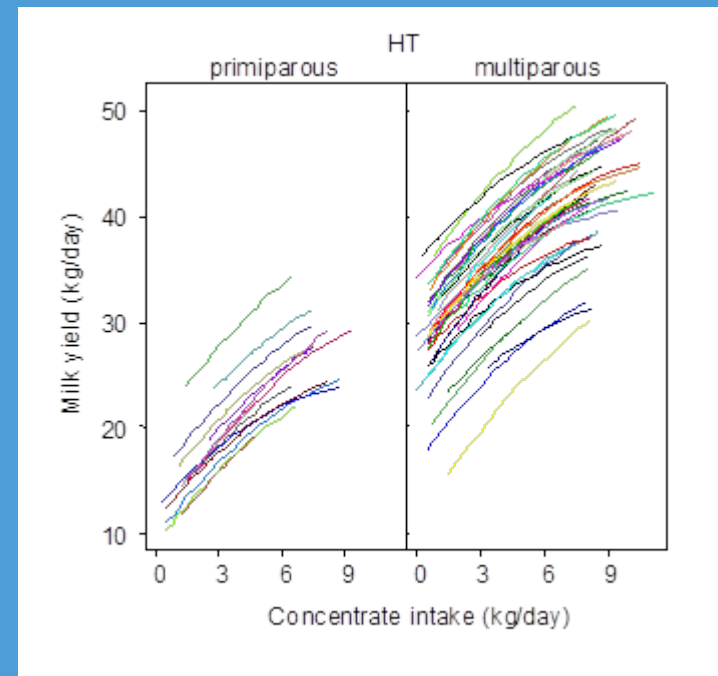
Traceability

State of the art: Intra-enterprise integration

- Automatic concentrate feeding
 - State of the art developments



Production related feeding



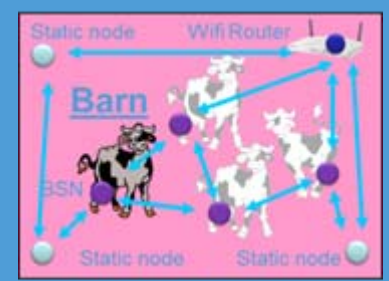
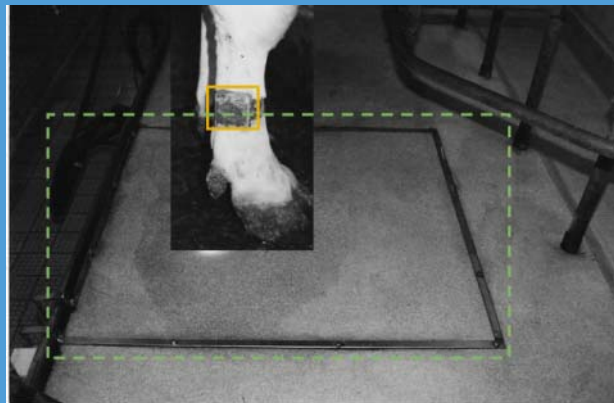
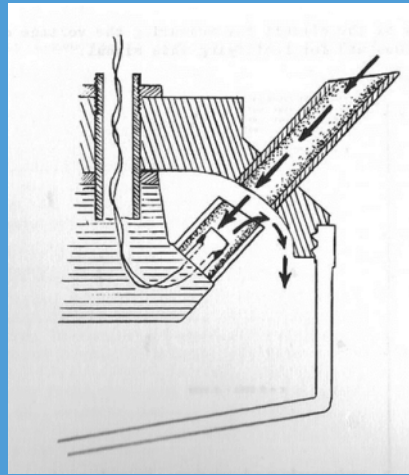
Dose-respons feeding



State of the art: Intra-enterprise integration

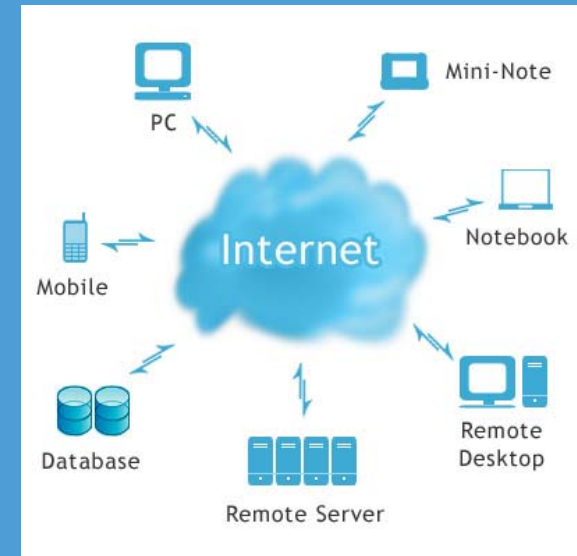
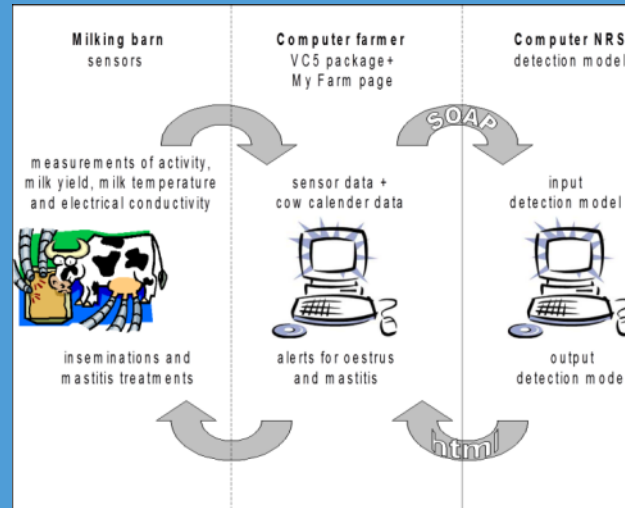
■ Sensors

- State of the art developments



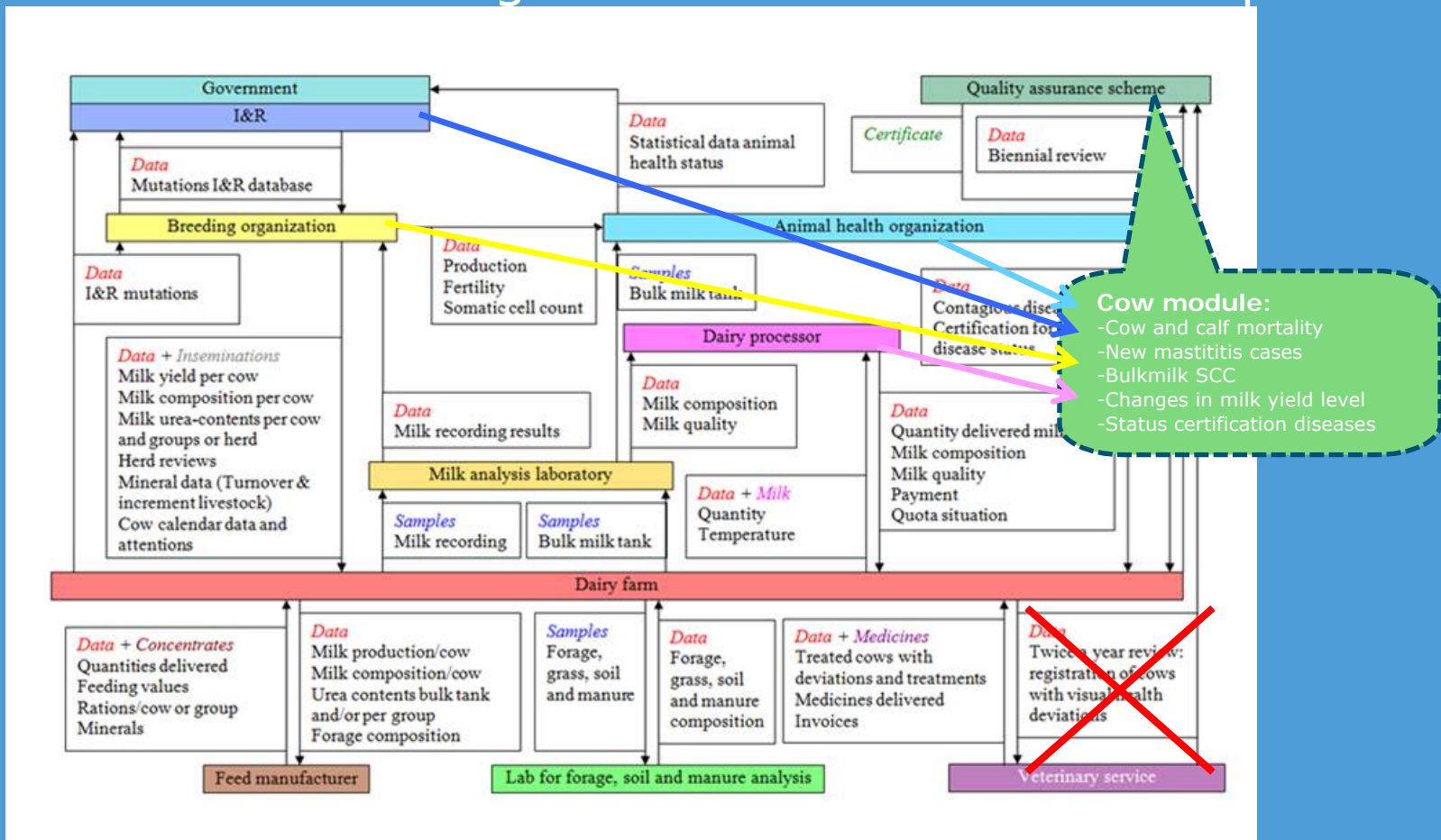
State of the art: Intra-enterprise integration

- Farm management systems (FMIS)
 - State of the art developments



State of the art: Inter-enterprise integration

Information exchange between farm and chain partners



State of the art - concluding

- Current - data exchange: numerous and various
 - Between farmers and service providers
 - Between farmers and governments
 - Between devices and FMIS

- Future – new technologies: even more data
 - Biosensors, wireless sensors
 - Data warehousing
 - From just alerts into advices or actions (SOP's)



Integration issues

- Physical infrastructure
 - Lack of interoperability
 - Maturity of new technology
 - Availability of internet infrastructure
 - Lack of collaborative data infrastructure
 - (older) Embedded systems are limited in handling data and standards
 - Adopting standards



Integration issues

- Data exchange
 - Bad integration of data standards in countries
 - Poor alignment of data definitions and data dictionaries
 - Data quality and security
 - Availability of public data sets and schemas



Integration issues

■ Application

- Local vs. centralized storage of application data
- Adoption of open web services
- Open standards by software industry

■ Process issues

- Business process modelling as new skill for developers
- Process approach only picked up in new areas



Integration issues

- Organization
 - Trust
 - Adoption of new technology
 - Limited investment possibilities
 - Lack of public involvement in colaboration (private-public)
 - CAP implications



Recommendations for new developments

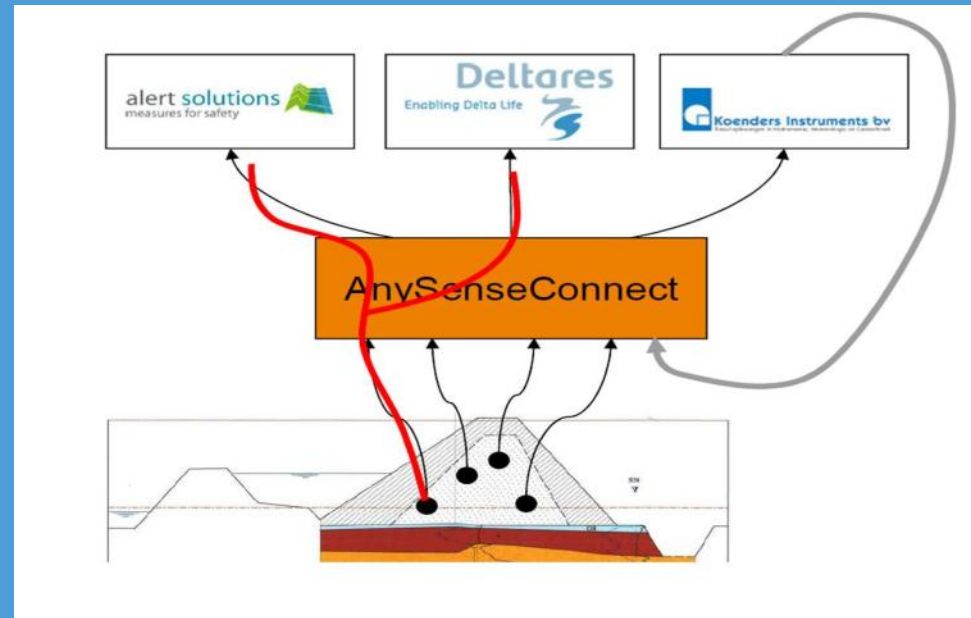
- Awareness and trust
- Open innovations
- Collaborative and SO infrastructure
- Business process standards and SO approach
- Choose standards



Demonstrator - Smart Dairy Farming project

■ AnySenseConnect

(www.ijkdijk.eu)



- Application programming interface (API)
- Internet data transfer sensors and observers
- Interface possibilities 'third' parties
 - Apps for mobile devices, websites etc.



Concluding

Let's make it happen !

Thank you !

