



THE GLOBAL STANDARD
FOR LIVESTOCK DATA

Annual Conference

ICAR2018.NZ

7 – 11 February 2018

Aotea Centre

Auckland,

New Zealand

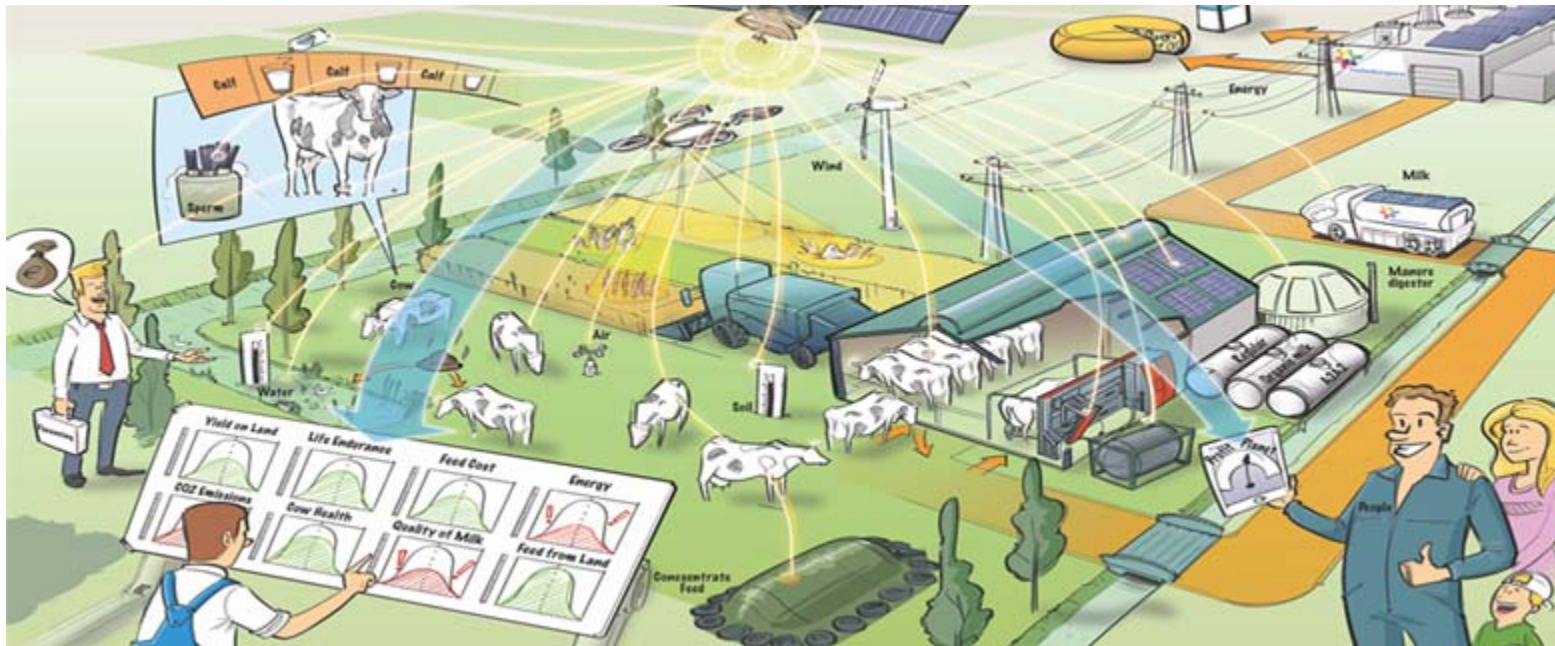


Animal Data Exchange Working Group Update

Co-Chairs: Robert Fourdraine and Bert van 't Land

Status of Dairy Industry Technology

- Parlor systems
 - Milk weights, milking times, milk components
- Animal monitoring systems
 - Activity, Ruminations, Health
- Milk diagnostics laboratories
 - Components, pathogens, pregnancy, diseases
- Genomic testing laboratories



Data Transfer Needs

- Modernize existing methods for data transfer
 - Volume of data (bigger farms)
 - Frequency of data transfer (monthly to weekly to daily)
 - Increase number of data items
- New data transfer methods
 - New data sources (new technologies)
- Increased user base needing data
- Developments in other groups (Health, sensors,..)




ADE Committee

- Robert Fourdraine, USA CRI (Co-Chair)
- Bert van 't Land, NL CRV (Co-Chair)
- Johannes Frandsen, DK Seges
- Beate Maassen-Francke, GER GEA
- Michael Lynch, IRL ICBF
- Harm-Jan van der Beek, NL Uniform-Agri
- Tony Francis, AUS Datagene
- Robert Moore, CAN Valacta
- Damien Pachoud, CH Datamars
- David Bleloch, UK Shearwell Data
- Andrew Cooke, NZ Rezare Systems
- Sarah Goerlich, CH Qualitas Ag
- Sven Schierenbeck, GER VIT
- Juliette Leclaire , FRA Institut de l'Elevage



Manufacturers



Software
Providers



MRO's



Sub Groups:

- Semantics/Ontology
 - Responsible for maintaining and enhancing a worldwide data dictionary
- Technical Implementation
 - Standardize data exchange in XML and/or JSON API's
- Outreach
 - Tasked with promoting the standards and make people aware and stimulate new implementation.



Semantics/Ontology

- Extensive resource developed over the past 5 years
- Some manufacturers started using this as a resource, but not on a large scale
- Reasons for not implementing (surveys and discussions):
 - lack of familiarity
 - incompleteness (missing domains)
 - not implementable for Json/REST interfaces
- New desired Services:
 - Activity
 - Rumination
 - Feed/concentrate
 -



Domain	Messages	From farm	To farm	Version
Animal data	Herd list		Yes	1.8
	Animal		Yes	1.8
	Arrival	Yes	Yes	1.8
	Departure	Yes	Yes	1.8
Reproduction	Heat	Yes	Yes	1.8
	Insemination	Yes	Yes	1.8
	Natural service	Yes	Yes	1.8
	Pregnancy check	Yes	Yes	1.8
	Parturition	Yes	Yes	1.8
	Abortion	Yes	Yes	1.8
Milking	Milking result		Yes	1.8
	Milking lab result		Yes	1.8
	Test day milking results	Yes	Yes	1.9
	Lactation milking results	Yes	Yes	1.9
	Life milking results	Yes	Yes	1.9
	Milking results in period	Yes	Yes	1.9
Grazing	Daily Grazing of Herd Summary	Yes	Yes	1.9
Animal Health	Health Event (diagnosis)	Yes	Yes	1.9

Technical Implementation

- WSDL 1.8 & XML available, 1.9 in progress
- Assessment on different technical implementations, mainly in REST API's (JSON)
 - NDX (Scandinavia)
 - ICBF (Ireland)
 - JoinData (Netherlands)
 - 365FarmNet (Germany)
 - Datalinker (NewZealand)



Outreach

- Recognizes that there are three distinct interest groups
 - Process systems (GEA, DeLaval, Lely,)
 - Milk Recording Organizations
 - Herd Management Systems (Valley Ag Software, Uniform Agri,)
- Differing interests and concerns about ADE
- Survey of interests groups to determine what the specific concerns are and what can be done to alleviate those.



Main concern: Collaboration process

- Innovation & Standardization are often in conflict
 - Agenda ICAR WG not insync with the different projects all over the world
 - We need collaboration instead of long waiting periods
- Possible solution: Open source development, sharing the work
 - Efficient handling of expansion proposals/ new branches
 - Users must be able to add concept definitions themselves unofficially until they are merged to the officially validated version and tightened up to the standards
 - contain definitions for sensor data as well as definitions for more static data (transaction messages).
 - have good import and export possibilities (XML,YAML, SENML,..)



Next steps

- Proposal for toolbox/governance process (github?) to support further development of DataDictionary by independent project teams on new branches (open source development)
- Branches can be adopted in 'official version' ADE standards after review and agreement ADE WG (jan 1st and july 1st)
- Besides XML also YAML definitions available
- Assess feedback from outreach efforts, possible consideration for developing coalition of MRO's that will proceed with implementation



Questions?

