



iDDEN

The international dairy data exchange network

Practical Lessons from Data Hub Implementation

Johannes Frandsen with great
support from Chris Murphy

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Streamlining data exchange between dairy herds,
milk recording organizations, farm service
providers, dairy equipment manufacturers and
on-farm software organizations.



Perspective from a user



Johannes Frandsen, SEGES, Director, Livestock:

Business responsible for Dairy Management System in Denmark for dairy farmers, advisors, veterinarians and other relevant stakeholders. Including:

- Central cattle database including the mandatory movement data to ministry
- Exchange of cattle related data with stakeholders across the dairy business
- Make the farmer happier and richer

Manager for NCDX Aps

NCDX Aps representative in iDDEN

Member of the ICAR ADE WG

The Danish perspective

- **We have seen the need for exchange of data for years**
- **We have been searching for the most cost-efficient way to make this happen**
 - National
 - Nordic
 - And now international level
- **We do get a lot of request from providers of on-farm systems to exchange data**

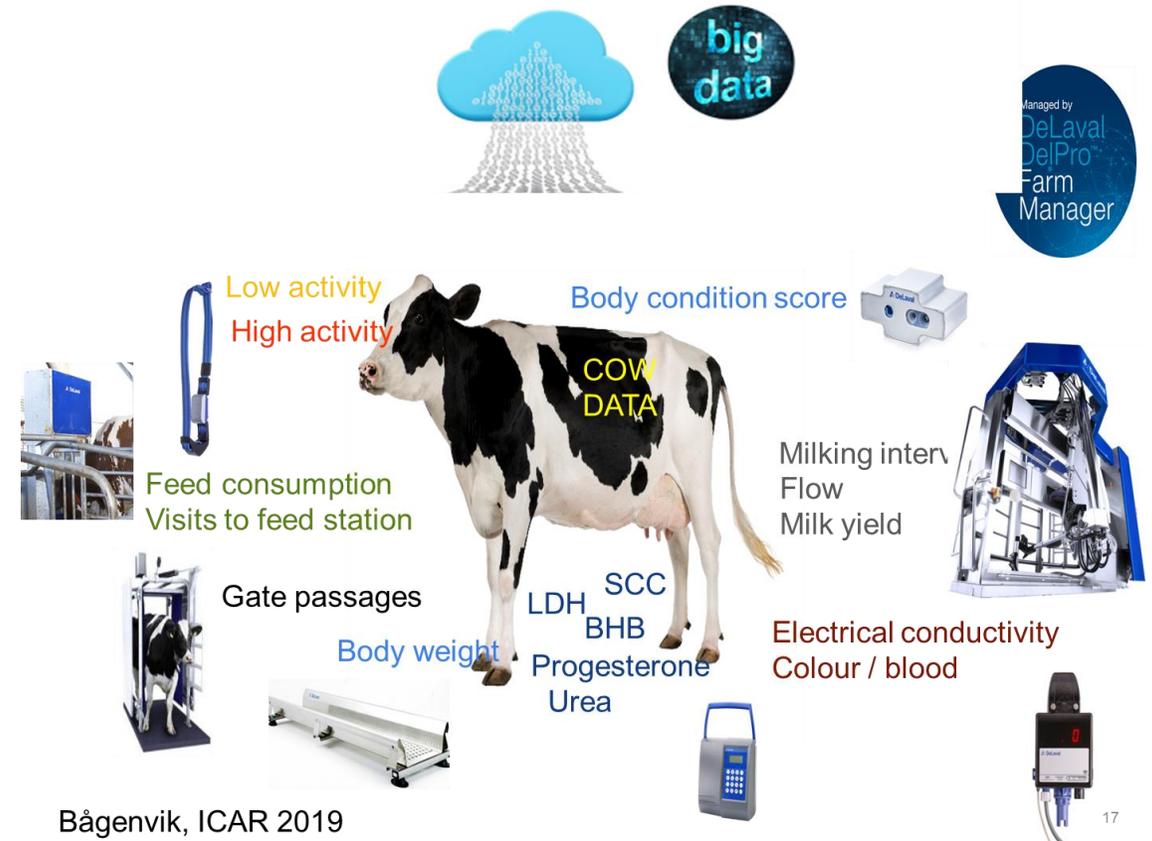
Today's presentation



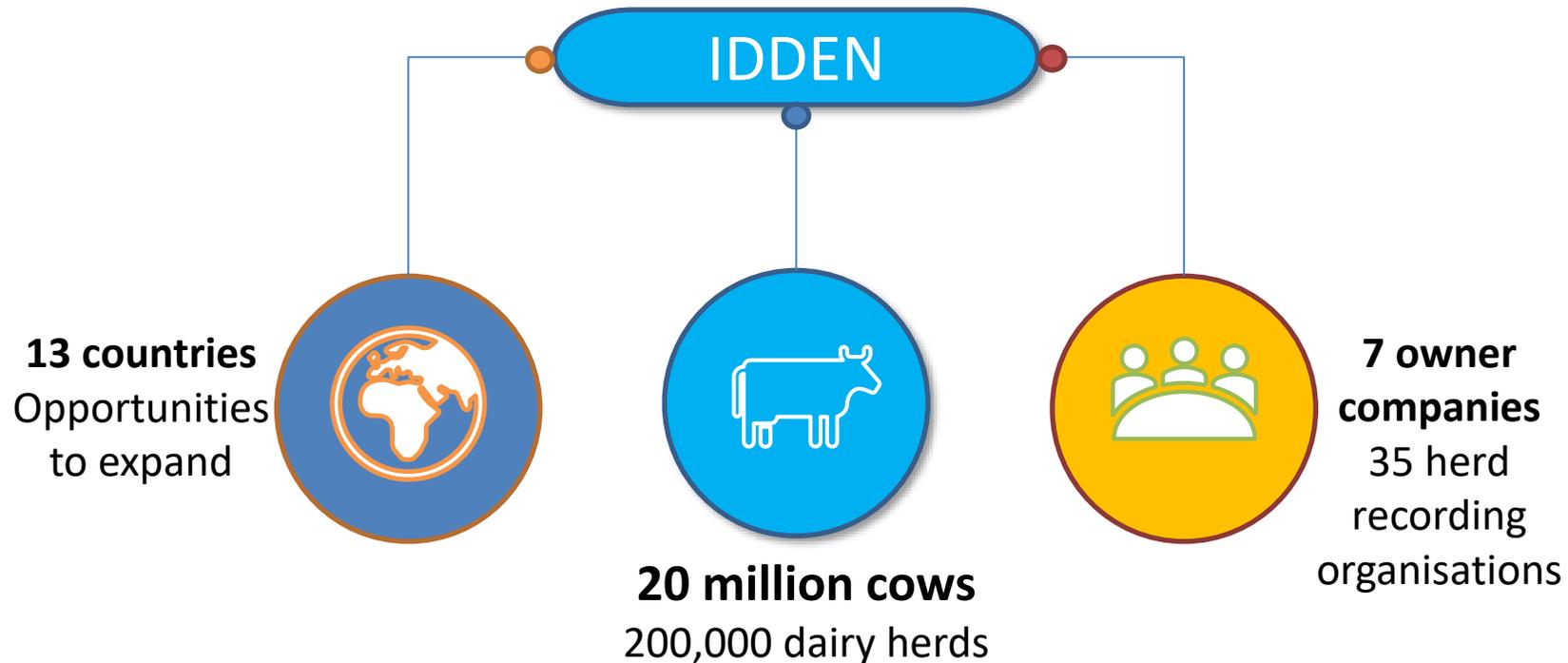
- International Dairy Data Exchange Network (iDDEN)
 - Background and rationale
- The barriers and challenges to data exchange
 - Technical
 - Regulatory
 - Organizational
- Solutions and practical lessons learned

Rationale

- Farms get bigger each year
- More need to replace (expensive) labor by technical equipment
- Equipment / sensors initially developed for use in humans are adapted to animals
- Availability of new data

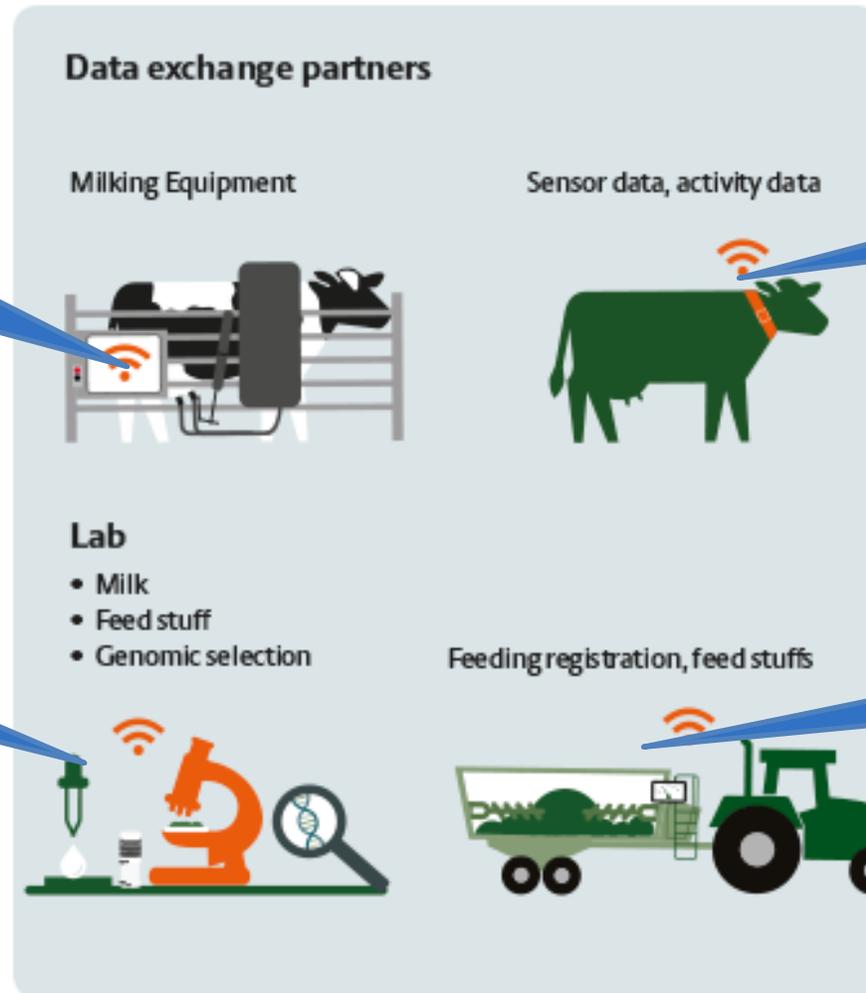


Worldwide Potential, current shareholders



- Future customers (OEM, DDO, and others) and additional shareholders will help to be one of the key players worldwide, to set a common standard for dairy cattle data and data exchange

Data Exchange on line – the goal



Animal data
Kg Milk
Fat & Protein
SCC
Flowdata
Sensor data
Kg feedstuff

Animal data
Activity
Ruminating
Movement
Standing/laying time
Health data

Milk analysis
Feed analysis
Genomic analysis

Feed rations
Kg loaded per feedstuff
Kg unloaded peer group
NIR

Barriers and challenges

- OEMs and other companies operating across different countries, languages, and data providers
- Different data definitions
- Lack of people or resources allocated to integration

Solutions and practical lessons learned

- Standardize as much as possible
 - ICAR ADE data definitions
 - Open Standards
- Critical size to influence or set standards
- High level of tech support
 - Info pack for new users
 - Biweekly coordination meetings during integration
 - Tech discussions via Slack
- Tools
 - Translation Tool to support OEMs for different markets
 - Admin Tool to monitor the day-to-day operation of your data exchange
- Professional service partner
 - Mtech (Finland), an experienced agricultural software service provider
- Sufficient size to finance the necessary infrastructure

Barriers and challenges

- Confusion about data use regulations
- Translating and understanding legal jargon
- Disconnect between technical teams, senior management, and lawyers
- Concerns about data being stored
- Concerns about data access

Solutions and practical lessons learned

- No data storage within iDDEN
 - Only temporary to deal with technical interruptions
 - Log files to help customers monitor their data exchange
- Authentication approaches
 - Farmers retain control of their data – they must authorize access
- Use of standardized, simple data use agreements
- An international approach – most OEMs are global or operate across many countries

Barriers and challenges

- Companies that:
 - Have no data management strategy
 - Are unclear on the value of data sharing
 - Want to ‘control’ data (even from other sources)
- Data exchange is seen as a “technical function” instead of a business priority
- Disconnect between technical teams and senior management (“decision makers”)
- Limited budgets allocated to data

Solutions and practical lessons learned

- Communication
- Communication
- Communication
- Simplifying data exchange processes
- Ownership and governance by a consortium of farmer-controlled member organisations from around the world
- Advisory Committee comprising iDDEN shareholders and strategic partners

World premiere of the iDDEN data exchange 😊

The image is a collage illustrating the iDDEN data exchange. It features three main components:

- Software Interface (Left):** A screenshot of a web application showing a calendar and a list of events. The calendar at the top has dates from 1/7 to 1/5. Below it, a table lists events:

| DATO | HÆNDELSE | DETALJE | INSEMINØR BEMÆRKNING | OPRETET AF | REDIGERET AF |
|------------|-----------------|----------------------------|----------------------|------------|--------------|
| 27-06-2022 | Inseminering | Ins.nr: 4, VH Bond PP | | | |
| 27-06-2022 | Brunst | | | | |
| 02-06-2022 | Forundersøgelse | | | Inseminør | Inseminør |
| 08-04-2022 | Inseminering | Ins.nr: 3, VH SlyPPRC | | | |
| 19-03-2022 | Inseminering | Ins.nr: 2, VH Bleech, ks k | | | |
| 18-03-2022 | Inseminering | Ins.nr: 1, VH Bleech, ks k | | | |

At the bottom of the interface, it says: "Test mode - AgriBusinessId: '63422' - ManagementUnitId: '155164' - dlineidentificer: '001DIRB' - kvbuser: 'SEGESDIRB' DLBR KvaegIT DMS - v2022.183.0.9859".- Computer Monitor (Center):** A monitor displaying a "Synchronization" window for "DeLaval Sync". The window shows a progress bar and a list of synchronization tasks. A password "password_delavalpwd" is visible on the monitor's bezel.
- Person's Hands (Bottom):** A close-up of a person's hands holding a device, likely a scanner or a data entry tool, used for data collection.

Additional elements include a blue navigation bar at the top right with buttons "Opret", "Hent", and "Tur", and a status bar indicating "Sidst opdateret: 2/5 2023 10:29:13".

- Farmers want their service organizations to help them make better use of data
- Benefits to data exchange are clear – but not all companies have seen the value (yet)
- Overcoming any technical barriers is relatively easy
- Legal barriers are overcome by only exchanging (not storing data), authentication, and standard agreements
- Organizational barriers are addressed by frequent communication, simplifying data exchange, and building trust
- It works!



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THANK YOU

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