



iDDEN
The international dairy data exchange network

iDDEN: An international perspective

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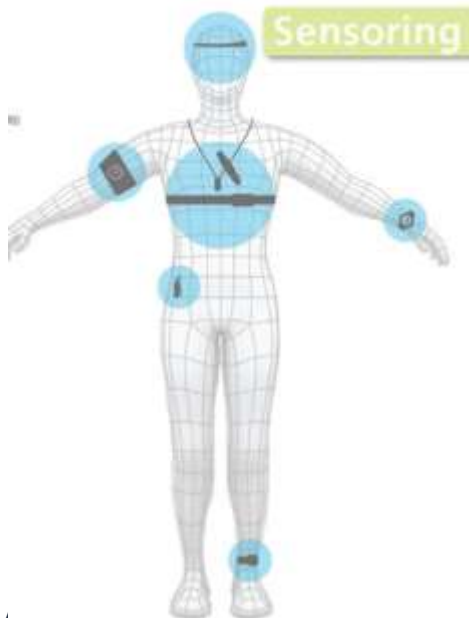
ICAR Conference 2021

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Dairy cattle

- Farms get bigger each year
- More need to replace (expensive) labor by technical equipment
 - Automatic milking > 50% in all new installations in Germany
- Equipment / sensors initially developed for use in humans are adapted to animals



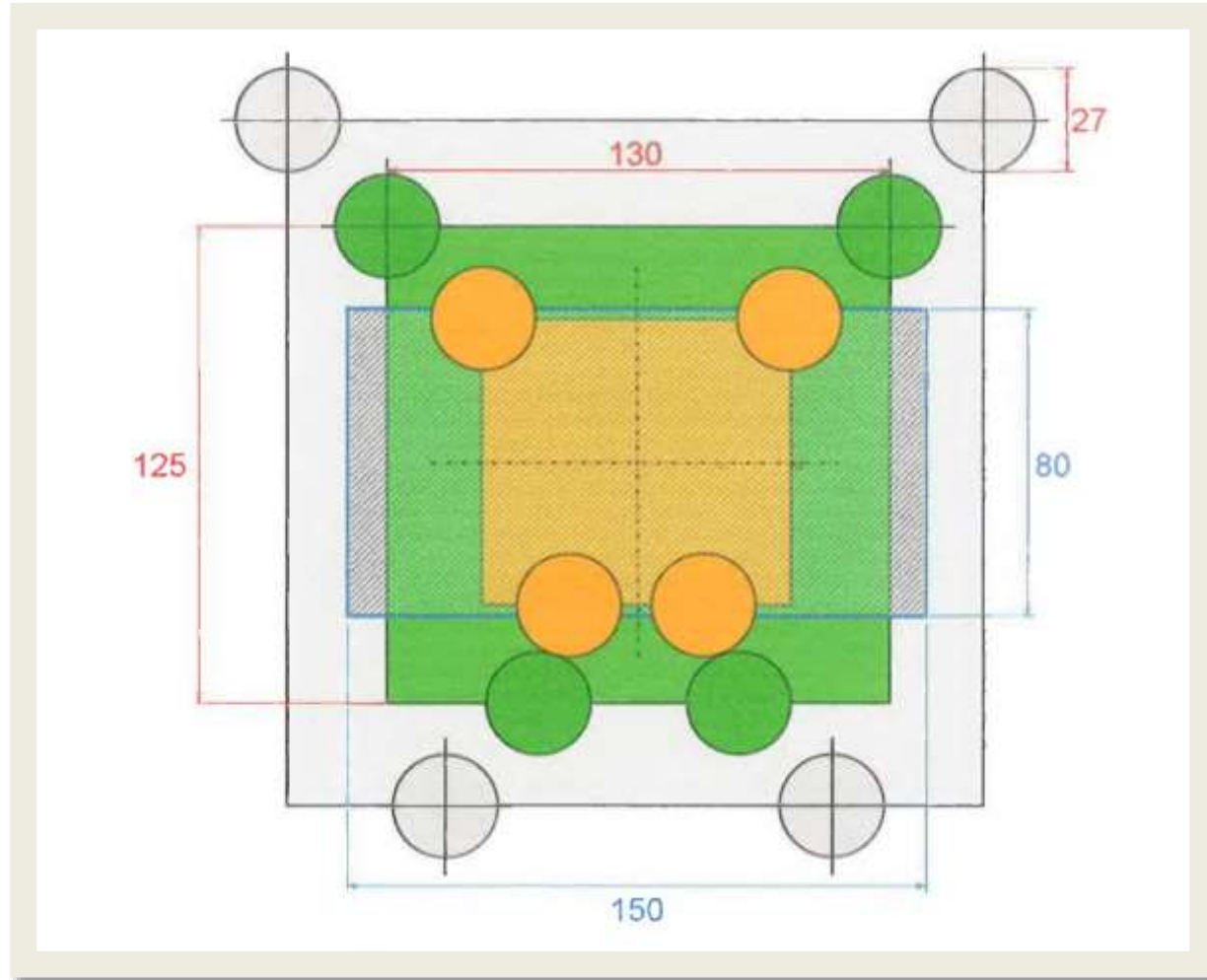
AMS



- Not only in small family farms, 56 stalls AMS in one of the largest herds in Germany → valuable data generated every minute



Teat placement data



- 20.000 cows in 70 herds in NLD, study of CRV
- Data:
 - Teat length
 - Teat placement
 - Udder depth
- Many observations within and also from later lactations
- Results:
 h^2 AMS > h^2 class
 r_g AMS : Class ~ >0



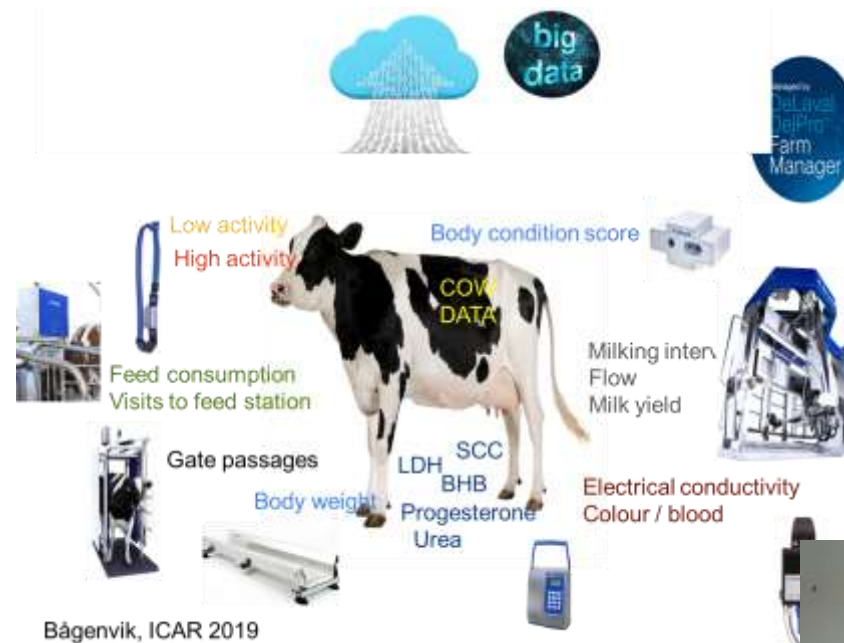
Availability of this data ?

- Big OEMs can do most things inside of their systems

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Motivation for iDDEN



- Digitalization on farms in many places in the world
- Many national initiatives of hubs for data exchange failed
- For all parties involved: the use of standardised interfaces and standardized data transfer mechanism will significantly reduce current costs
- Major OEMs work global
- **iDDEN: Joint effort to build a network that enables efficient data exchange respecting data security and data access and data usage policies**

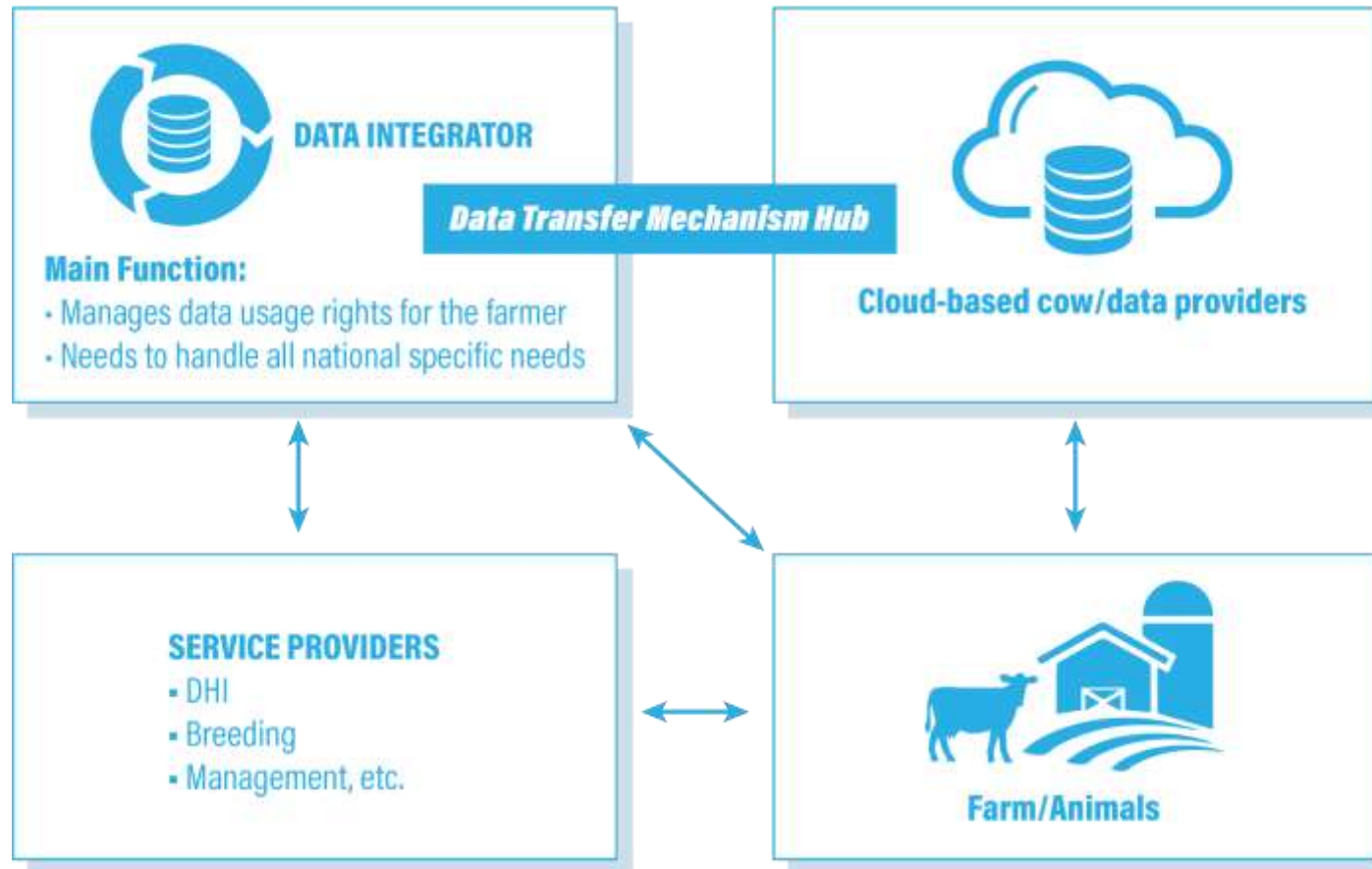


A data exchange/interface service between global dairy equipment manufacturers and farm service providers located around the world



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Schematic of data flow between on-farm data and other (central) data



Current owners/shareholders

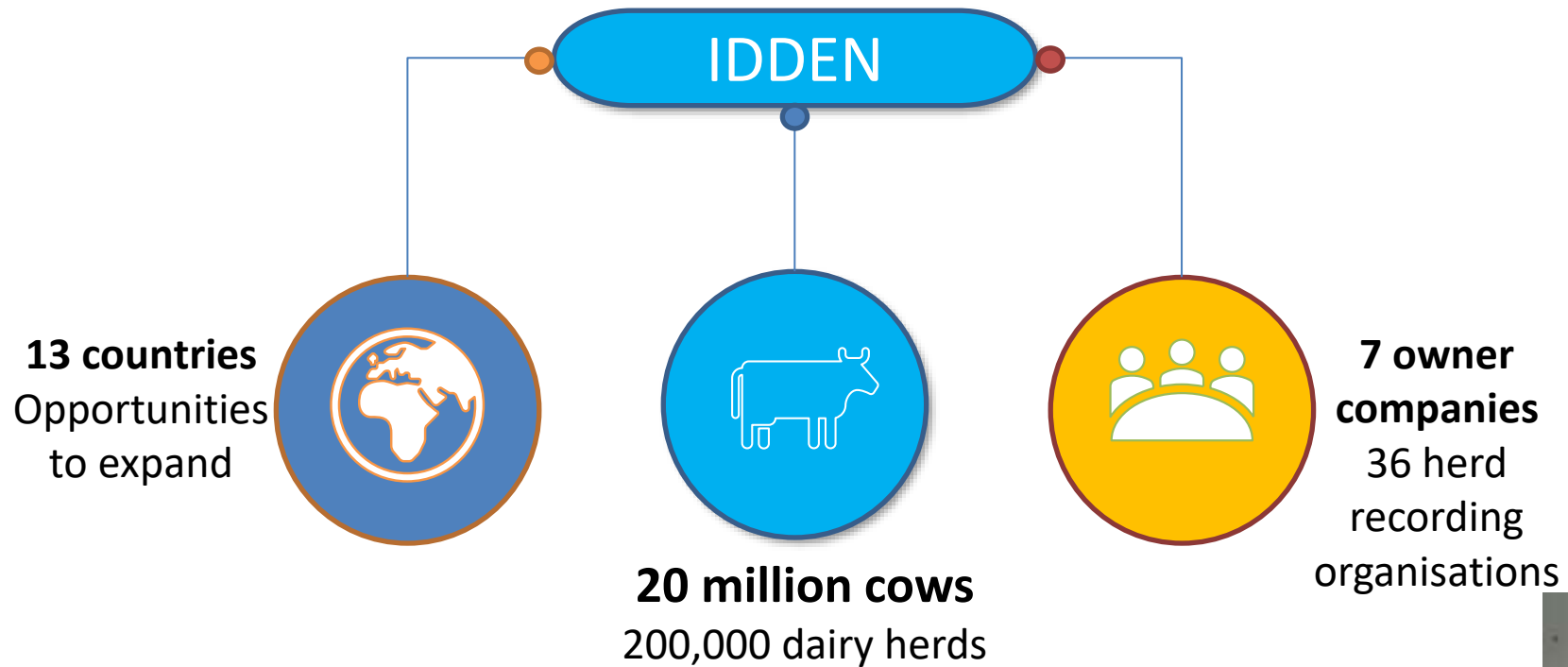


- Shareholder Designated Area Responsibilities
 - CRV The Netherlands & Belgium
 - Data Gene Australia
 - Lactanet Canada
 - NDHIA USA
 - NCDX ApS Den, Ice, Fin, Nor, Swe
 - RDV Austria, Germany
 - vit Germany, Luxemburg

- iDDEN has been created as a GmbH (limited liability company) under German law on May 6, 2020, acting Managing Director → Reinhard Reents



Worldwide Potential



Criteria for participants



Owners / Shareholders

- dairy farmer-controlled organization
- national scope with at least one (1) million dairy cows

Customers

- Can be a dairy farmer-controlled organization
- an equipment manufacturer
- another entity that wants to exchange dairy cattle data

Strategic Partners

- Must be an original equipment manufacturer (OEM) with significant market share
- Have significant input to technical implementation
- Currently frequent meetings with three OEMS
 - Work on the agreements and in parallel
 - Technical work



Technical implementation



- Purchase of the NCDX solution from the NCDX group that is operational in the Scandinavian countries
- Expansion of the current solution to handle also cloud based repositories of data
- Contract between iDDEN GmbH and Mtech (Finland) to house, expand and maintain the iDDEN system
- Implementation of the ICAR ADE Guidelines and standards



- Have an Agreement for Usage of data
 - Farm, MRO and OEM are willing to share data
 - Farm grants usage of sending data from OEMs (iDDEN-ID) to MROs (iDDEN-ID)
 - Farm grants usage of sending data from MROs (iDDEN-ID) to OEMs (iDDEN-ID)
- The delivering partner has to check in his local mandate system if the requesting partner is allowed to access the requested data
- The implementation of this mandate system is up to every partner as we think every partner has already some sort of system running



Summary iDDEN



- 7 partners have invested in a joint effort to enable better use of dairy cattle related data
- A sound technical solution is complex and requires a professional service partner → Mtech, Finland
- Interest of the large OEMs because iDDEN can solve their problem with numerous costly national interfaces
- Interest from other MROs and Farm Service Partners, eg
 - Feed advice
 - Health monitoring and advice
 - Etc.

Trust in iDDEN because herd owners and managers
are in the lead





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Thanks for the attention

Reinhard Reents

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