



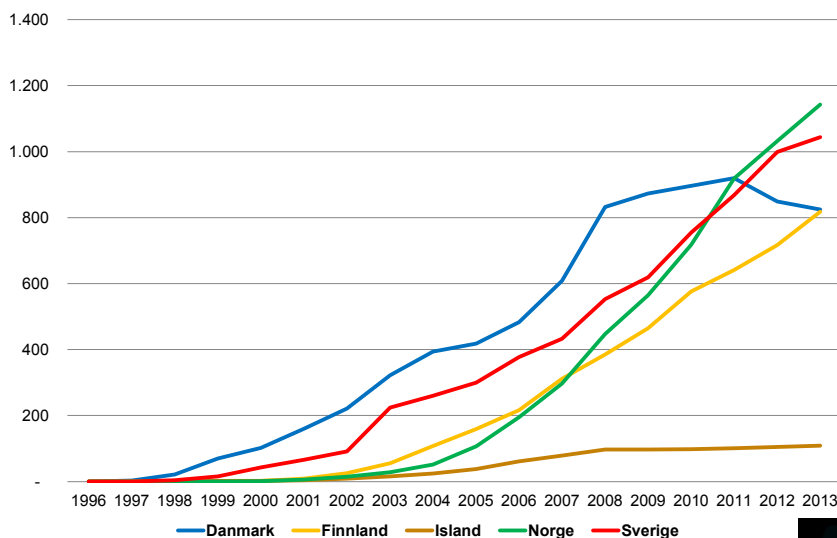
THE POTENTIAL OF UTILIZING DATA FROM FMS

- Increased reliability achieved by higher data quality
- Keep down the labor costs by utilizing existing data sources
- Reduced costs in running breeding programs
- Access to information on new traits
- Nordic countries are in a leading position in this area



NO. OF ROBOT HERDS IN THE NORDIC COUNTRIES

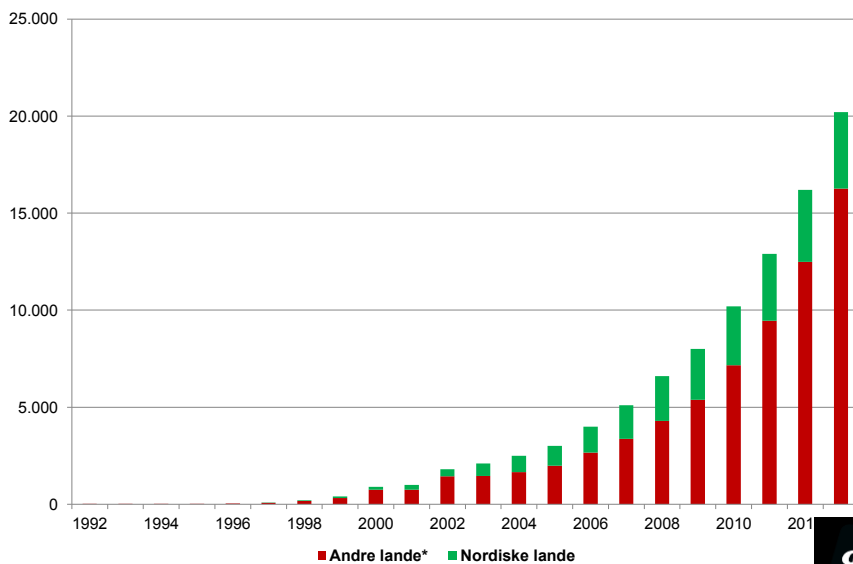
(REF: NORDISKE MEIERIORGANISASJONERS SAMARBEIDSUTVALG FOR MJØLKEKVALITETSARBEID)



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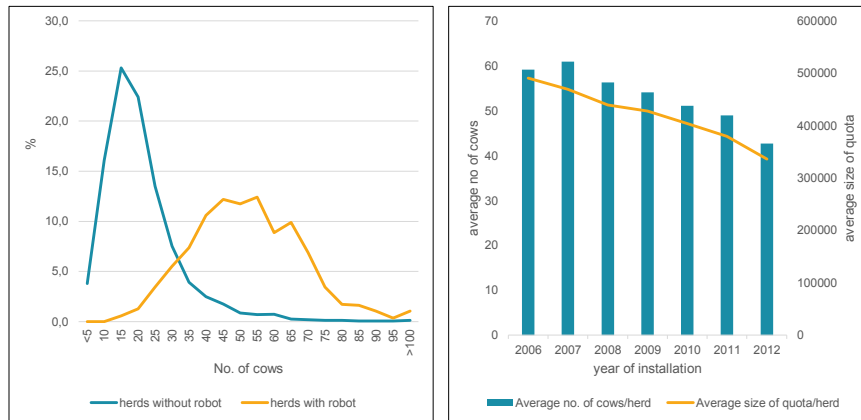
NO. OF ROBOT HERDS IN THE WORLD

(REF: NMSMT & KONING, 2013)



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SIZE OF ROBOT HERDS IN NORWAY



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TWO TASKS TO BE SOLVED

1. Utilize «regular» information from the FMS
 - Rationalize the reporting for the farmer
 - Quality assurance
2. Get access to new information recorded in the FMS
 - Research
 - Breeding program
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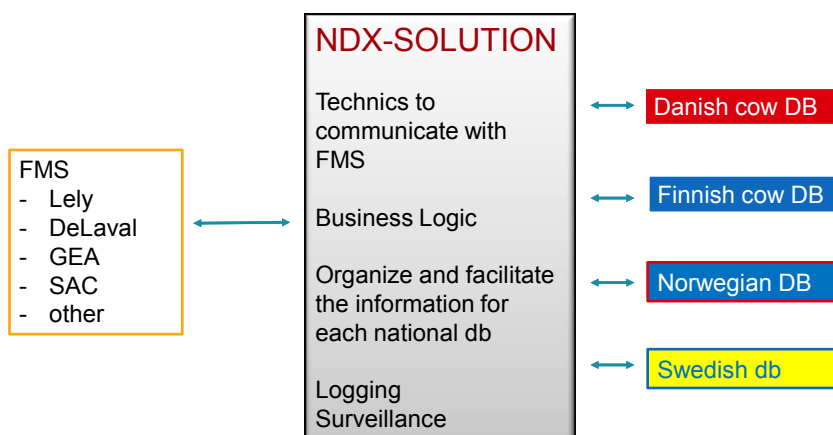
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NDX-PROJECT

- A routine based system that retrieve, organize and facilitate data from FMS to national cow databases
 - Calving /Birth info
 - Transfer (in, out)
 - Slaughter info
 - Test Milking, drying off
 - Milk analysis
 - Inseminations, matings, pregnancy checks, heat detection
 - Health
 - Body condition, body weight, chest width

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SIMPLIFIED SKETCH



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NEW POTENTIAL TRAITS FOR BREEDING PROGRAMS

- Milking speed
- Temperament
 - In relation to milking
 - Activity
- Conformation (teat position)
- Conductivity
- SCC
- Feed efficiency
- Rumen activity
- Milk quality parameters
- Etc..



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CHALLENGES

- Requires close cooperation and well will from the companies (Lely, DeLaval, etc)
- Of great interest for many disciplines and requires cooperation between many fields
- Costs money, somebody has to pay..
- Focus on ownership of the data
- Technology develops and changes continually
- Nordic cooperation?

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MILKING SPEED AND TEMPERAMENT

- Kg milk per minute “box time” per lactation
- Percent of «kick-offs» per lactation
- Percent of incomplete milkings per lactation

TRAIT	Heritability
Milk/Boxtime	0,29
%KickOffMilkings	0,20
%IncompleteMilkings	0,08



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CORRELATIONS TO CURRENT TRAITS

Robot data	Subjectively graded traits currently used			
		Temperament	Leakage	MilkingSpeed
	Milk/Boxtime	-0,22 (0,09)	0,53 (0,07)	-0,88 (0,03)
	%KickOffMilkings	0,54 (0,11)	0,02 (0,13)	0,27 (0,11)
	%IncompleteMilkings	0,27 (0,18)	-0,12 (0,20)	0,08 (0,18)

- High correlation between Milk/Boxtime and MilkingSpeed – Almost the same trait.
- Relatively high correlation between %KickOffMilkings and Temperament.

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CONCLUSIONS

- Information from FMS will be very important for the breeding program in the future.
- Promising results on milking speed.
- Offers great possibilities for saving costs and for increased output from the breeding program.
- NDX is a good start, more work to be done.



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