



THE GLOBAL STANDARD FOR LIVESTOCK DATA

Network. Guidelines. Certification.

International Data exchange platform for the recording and traceability of worldwide artificial inseminations: a new and modern concept

Olivier Gérard et al. (2019)

ICAR Artificial Insemination & Related Technologies Working Group

Version 1.1

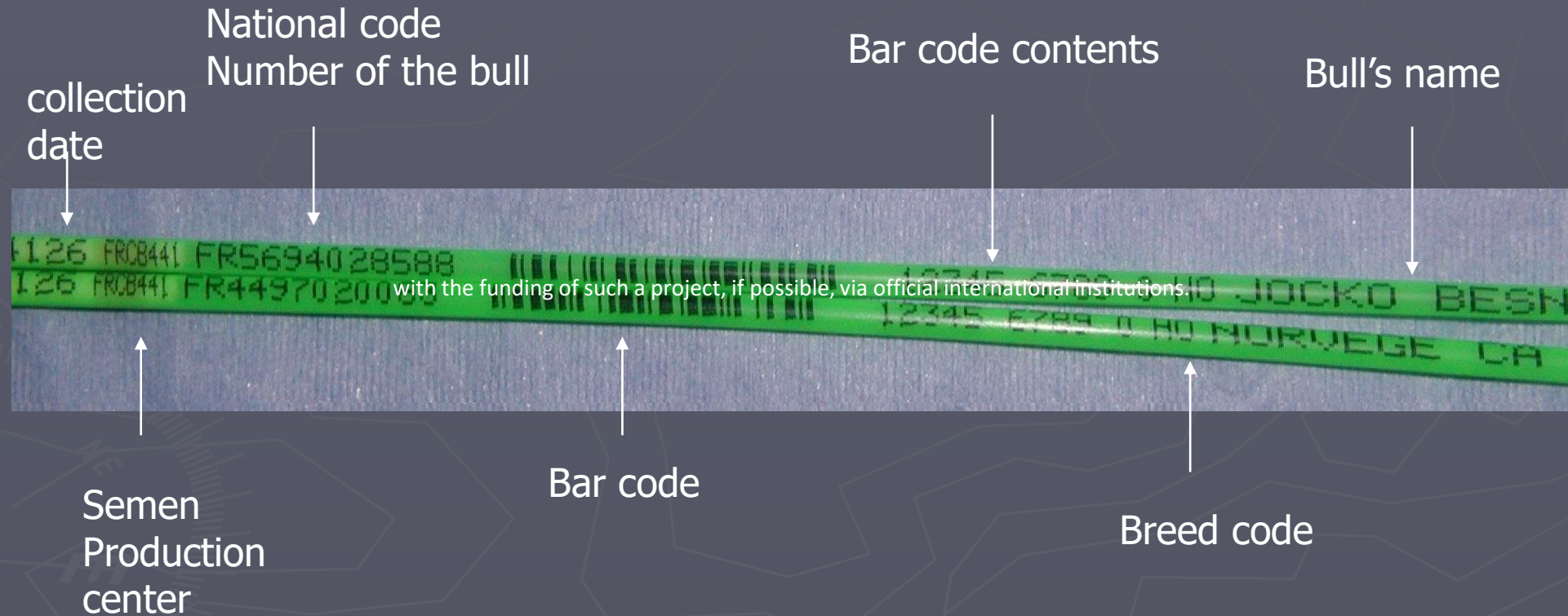
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Introduction

- Traceability: a need
 - for animal and public health
 - For food safety
 - For performances recording in ruminants and genetic selection
 - For genealogy
 - For zootechnical data recording
 - For pricing/invoicing
 -
- Solutions
 - Hand writing/computer recording
 - Barcoding
 - In future: QR codes, RFID chips, ????
 - Different technical solutions already in use



Different technical solutions: the French system



New concept: the idea

- How to get access to basic and reliable information regarding sires belonging to various selection units all over the world?
- How to get access to data when operating in the middle of nowhere?
- How to harmonize the access to the data exchange platform when working with different ID systems (barcodes)?



Main difficulties

- To convince Selection Units to fulfill and update this platform with recent and reliable data:
 - Potential access to confidential trade statistics
- To harmonize tools and information stored in this DEP
- To make people accept to use the NAAB code as an entrance key to the DEP
- To find adapted technical solutions: API, wireless connections, ...
- To find competent and motivated people to follow up the project
- To find fundings to develop the concept

New concept: first step

- -any AI technician in the fields inseminating a bovine female can connect himself to the international DEP from a mobile connected device
- -key entrance code to the international database will be three digits NAAB code identifying any CCS in the world added to the current barcode used by the CCS.
- -any CCS will be free to include various information within its own file in the DEP: genetics, genomics, sanitary, genealogy,...Minimum ICAR recommendations
- -connection from the fields to the DEP will be done thanks to an application programming interphase (API) giving access to individual CCS information



New concept: first step

minimum information will be the full deciphered content of the printed barcode: to be defined (see Mel DeJarnette's survey) or written info on straws

- maximum information available will have no limit and will be property of the CCS owner of the sire.
- participation to the worldwide database will be on a voluntary basis
- validation and acceptance of the NAAB Code number (3 digits) to identify semen Collection Centers over the planet as an entrance key to the database

New concept: second step

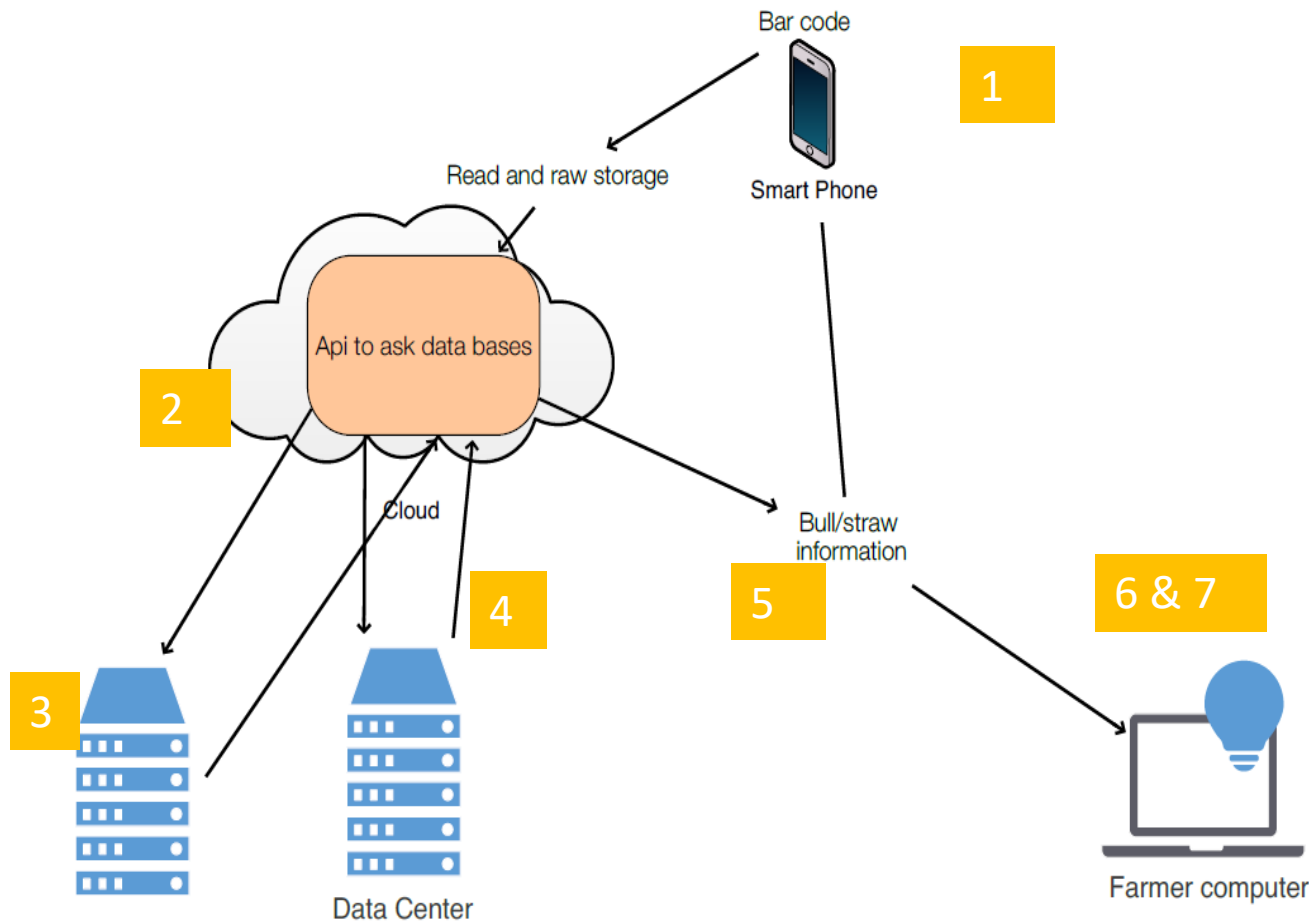
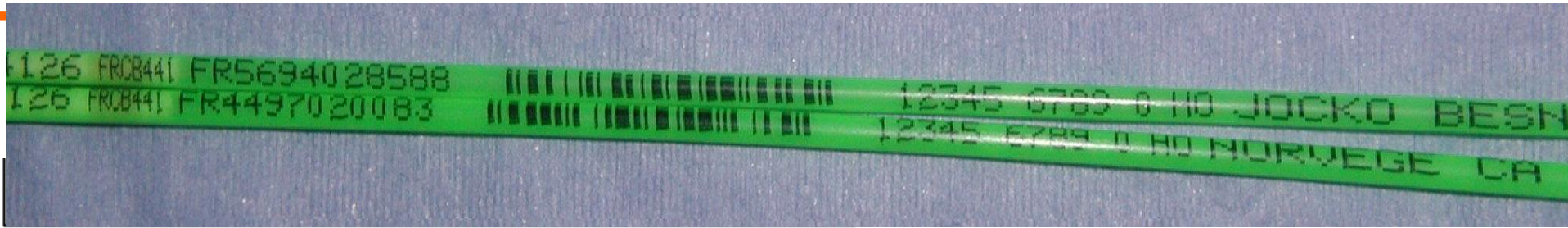
- -finding partners to develop and evaluate the technical feasibility of the concept: two or three different countries (not limited) representatives from different continents (if possible). Exchanges with Interbull
- -evaluating the total costs, advantages and drawbacks of the system
- One of the missions of ICAR AI and related technologies

New concept: third step

- funding of such a project, if possible, via official international institutions.



Any
others?



1. Reading of the barcode via a smartphone (camera or with a specific reader connected by Bluetooth/cable)
2. Transmission of information to a platform (ADE platform ?) to get information linked to the straw ;
3. use of a dedicated application (API?) to :
 1. (i) decode the barcode and specially the first 3 digits to identify the Semen collecting center (SCC) or the seller (Marketing code MC) ;
 2. (ii) send a request to the data base of the SCC/MC ;
4. Extraction of data by the SCC/MC
5. Which is sent back to the application platform
6. transmission to the farmer or to the AI technician
7. Storage in farmer or technician computer



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Thank you

Via Savoia 78, esc.A, int.3, piano 1
I-00198 Rome, Italy
tel. +39 - (0)685 127 231 / (0)685 237 237
fax : +39 - (0)623 315 553
www.icar.org

Authors and co-authors

Olivier Gérard^{1, a)}, Laurent Journaux^{1, b)}, Fritz Schmitz-Hsu^{1, 2, c)}, Jens Baltissen^{1, d)}, Mel DeJarnette^{1, e)}, Jos Hooijer^{1, f)}, Lamberto Morelli^{1, g)}, Richard Spelman^{1, h)}, Brian Wickham^{1, i)}

¹⁾Artificial Insemination and Related Technologies Working Group, ICAR, Rome, Italy

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