THE GLOBAL STANDARD FOR LIVESTOCK DATA

Network. Guidelines. Certification.

What Next? How to Ensure Milk Recording Services are Prepared for the Challenges to Come

Steven Sievert

Chair, ICAR Recording & Sampling Devices Sub-committee

21 June 2019

THE GLOBAL STANDARD FOR LIVESTOCK DATA

Network. Guidelines. Certification.

Challenges in Modern Herd Recording

Are We Listening?

Dairy cattle are ideal candidates for repeated measures

– What can I tell you?

Producers have more data on farm today than ever

- How are you going to use my farm/herd data?

Recording organizations are looking for guidance

– What do we do?

THE GLOBAL STANDARD FOR LIVESTOCK DATA

Network. Guidelines. Certification.

Current RSD-SC Goals & Priorities

- Updates to Section 11 & Addition of Sensor Device Guidelines
- Delivery of Device Routine Procedures to Members
- Standardization/Innovation in Testing of AMS/VMS
- Innovation in Testing Sensor Devices/Systems
- Separation of Goats & Sheep with New Standards
- Revisions & Expansion of Test Centre Software
- Universal Coding System for all Recording/Sensor Devices

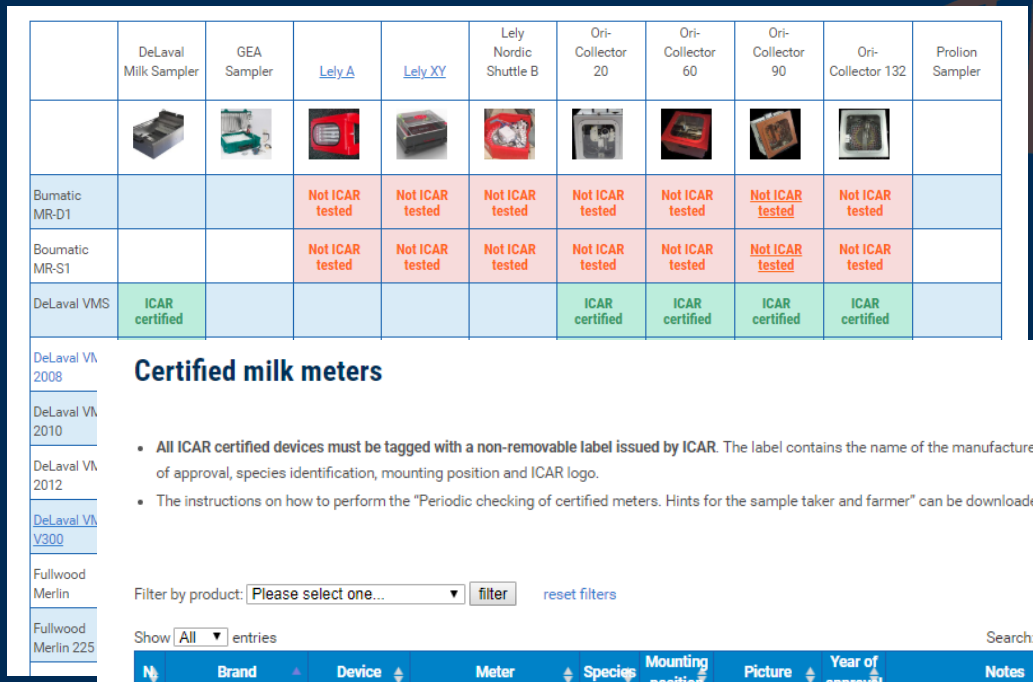
THE GLOBAL STANDARD FOR LIVESTOCK DATA

Network. Guidelines. Certification.

ICAR Certifications and Routine Procedures

New Resources on Certification, Routine Procedures & User Manuals are Available on ICAR Website

Continuously updated by RSD-SC with manufacturer support



	DeLaval Milk Sampler	GEA Sampler	Lely A	Lely XY	Lely Nordic Shuttle B	Ori-Collector 20	Ori-Collector 60	Ori-Collector 90	Ori-Collector 132	Prolion Sampler
Bumatic MR-D1			Not ICAR tested	Not ICAR tested	Not ICAR tested	Not ICAR tested	Not ICAR tested	Not ICAR tested	Not ICAR tested	
Boumatic MR-S1			Not ICAR tested	Not ICAR tested	Not ICAR tested	Not ICAR tested	Not ICAR tested	Not ICAR tested	Not ICAR tested	
DeLaval VMS	ICAR certified					ICAR certified	ICAR certified	ICAR certified	ICAR certified	

DeLaval VM 2008
DeLaval VM 2010
DeLaval VM 2012
DeLaval VM V300
Fullwood Merlin
Fullwood Merlin 225

Certified milk meters

- **All ICAR certified devices must be tagged with a non-removable label issued by ICAR**. The label contains the name of the manufacturer, name of the device, year of approval, species identification, mounting position and ICAR logo.
- The instructions on how to perform the "Periodic checking of certified meters. Hints for the sample taker and farmer" can be downloaded here

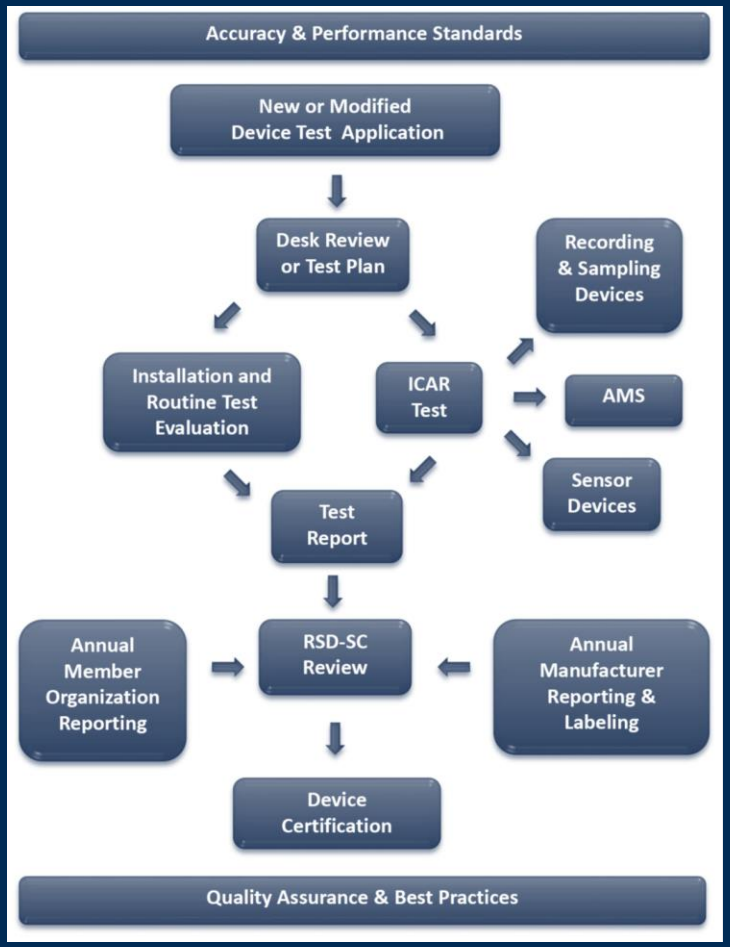
Filter by product: Please select one... filter reset filters

Show All entries Search: mm27

N	Brand	Device	Meter	Species	Mounting position	Picture	Year of approval	Notes	Routine check	User manual
358	DeLaval	DeLaval MU486	MM27BC	Cattle	High Line		2013	Contains SCR Engineers LTD Free Flow Meter Technology	open	
363	DeLaval		MM27BC	Cattle	Low Line High Line		2013	1) Contains SCR Engineers LTD Free Flow Meter Technology. - 2) Routine calibration using ICAR-certified computerized calibration procedure in Delpro	open	open

THE GLOBAL STANDARD FOR LIVESTOCK DATA

Revisions to Section 11 in Progress



THE GLOBAL STANDARD FOR LIVESTOCK DATA

Section 11 - Guidelines for Testing, Approval and Checking of Recording and Sampling Devices
List of Procedures

- [Overview] Guidelines for Testing, Approval and Checking of Recording and Sampling Devices
- [Procedure 1] Procedure for Application for Testing of Recording and Sampling Devices or Sensor Devices and/or Systems
- [Procedure 2] Procedure for Testing of Traditional Milk Recording and Sampling Devices
- [Procedure 3] Procedure for Testing of Automatic Milk Recording and Sampling Systems
- [Procedure 4] Procedure for Testing of Sensor Devices and/or Systems
- [Procedure 5] Procedure for Evaluation of Installation and Routine Calibration Procedures for Recording and Sampling Devices
- [Procedure 6] Procedure for Evaluation of Installation and Routine Calibration Procedures for Sensor Devices and/or Systems
- [Procedure 7] Procedure for Computerized Solutions for Periodic Checking of Recording and Sampling Devices
- [Procedure 8] Procedure for Computerized Solutions for Periodic Checking of Sensor Devices and/or Systems
- [Procedure 9] Procedure for Test-Day Practices Using Recording or Sensor Devices and Electronic Identification Simultaneously
- [Procedure 10] Procedure for Test-Day Practices for Obtaining Milk Samples on Individual Animals from Sampling Devices
- [Procedure 11] Procedure for Labeling of ICAR-Certified Devices
- [Procedure 12] Procedure for Annual Reporting of ICAR-Certified Devices in the Marketplace by Manufacturers
- [Procedure 13] Procedure for Annual Reporting of ICAR-Certified Device Usage and Satisfaction by Member Organizations
- [Procedure 14] Procedure for ICAR Certification of Devices

THE GLOBAL STANDARD FOR LIVESTOCK DATA

Network. Guidelines. Certification.

ICAR Universal Coding Systems for Devices

Development and delivery by Interbull (tentative) on behalf of ICAR

Will include traditional recording devices and sensor devices/systems

Allow for data source characterization by member organizations, data handlers and data users

In addition to device code, system would include:

- -Manufacturer
- -Software Name
- -Data measured
- -Device Name
- -Software Version
- -ICAR Status
- -Other Marketplace Names
- -Firmware (if applicable)
- -ICAR Status Date

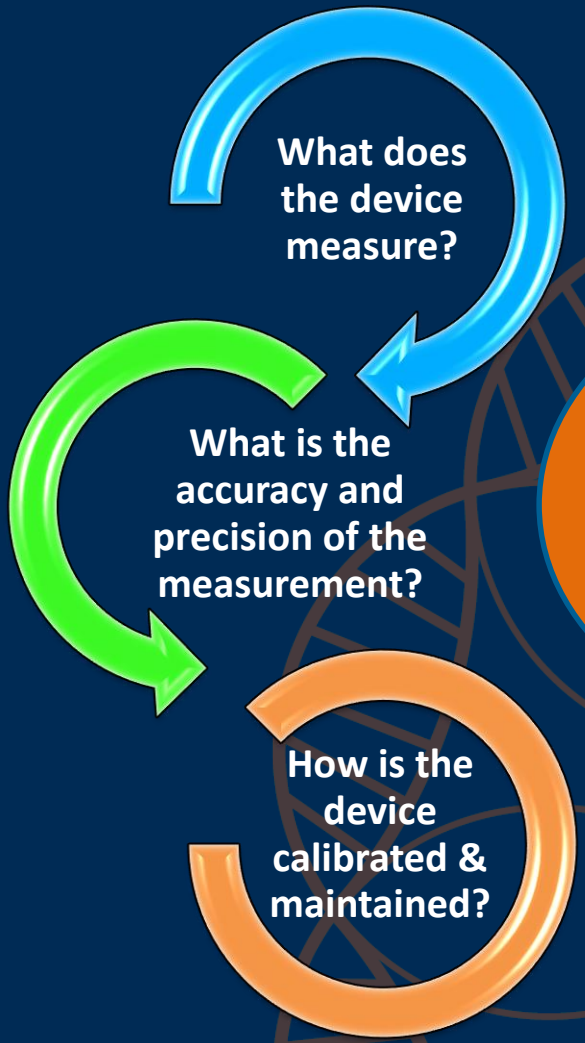
Challenges with the Next Generation of Devices

- We are Looking at Systems Instead of Devices
- New Systems Measure More than a Single Parameter
- System Measures One Variable and Reports Data as a Different Trait
- Reliance on Automatic ID Systems and Association with the Correct Cow
- Speed of Commerce is Faster than ICAR Testing

THE GLOBAL STANDARD FOR LIVESTOCK DATA

Network. Guidelines. Certification.

Reviewing Recording & Sampling Devices or Systems



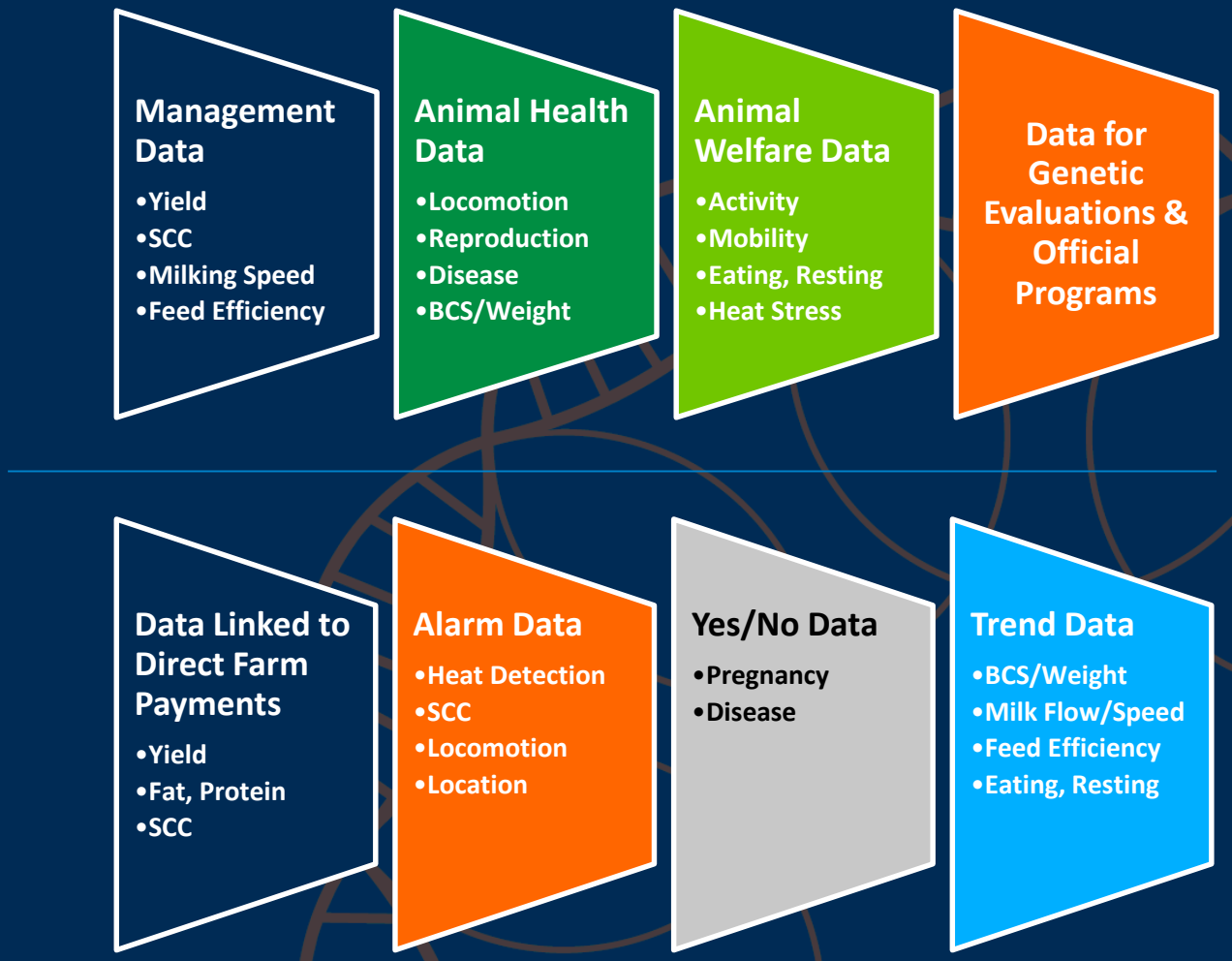
We cannot determine suitability of data until we know and understand the measurement

THE GLOBAL STANDARD FOR LIVESTOCK DATA

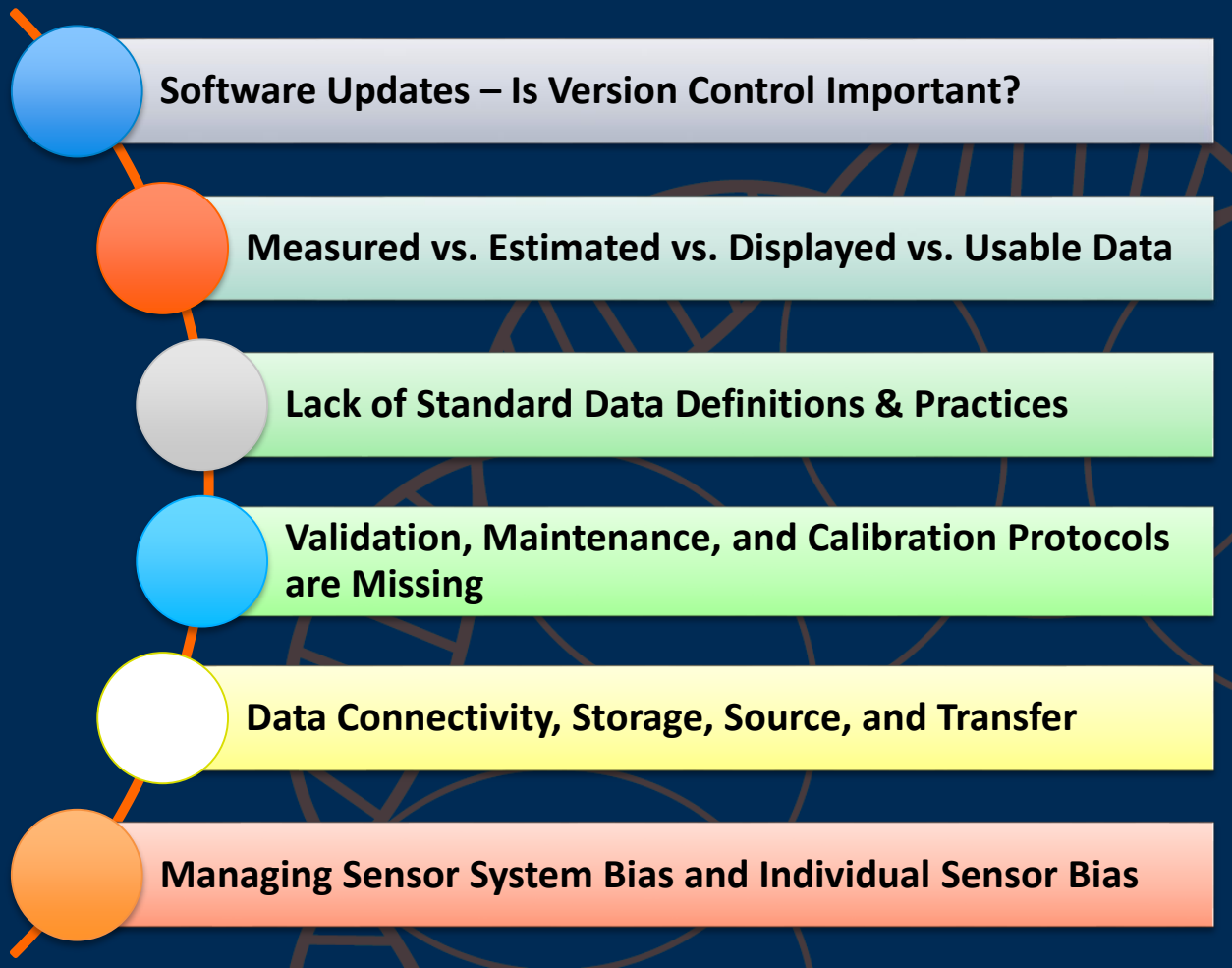
Network. Guidelines. Certification.

Multiple Ways to Classify On-Farm Data

Do We Know What We Want or Need?



Sensor Devices Bring More Challenges



THE GLOBAL STANDARD FOR LIVESTOCK DATA

Network. Guidelines. Certification.

Animal ID is More Important Than Ever

- The 'official ID' of an animal most likely will not be the same as ID associated with sensor measures
- Animals may have multiple IDs over their lifetime
- Animals may have multiple IDs on their body at once
- Databases will need to have protocols for ID cross-referencing and validation
- Need ICAR & MRO protocols for on-farm validation of the automatic ID system and for data transfer/custody

THE GLOBAL STANDARD FOR LIVESTOCK DATA

Network. Guidelines. Certification.

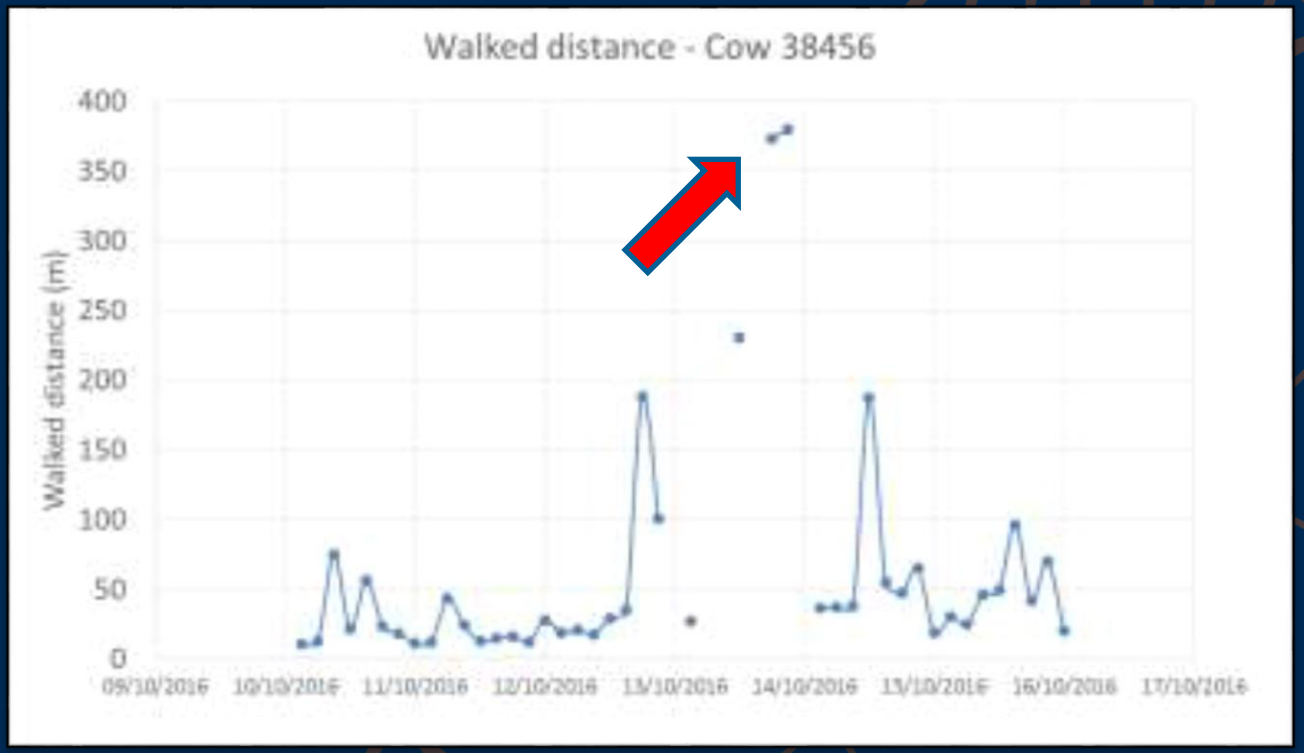
System Connectivity & Data Capture is a Concern

How are values computed for missing data points?

Estimations?

Mean values without missing data?

Component of the quality of data entering the system



What is the Difference?

Raw Data
vs.
Estimated Data
vs.
Displayed Data
vs.
Usable Data

- Measuring one variable & reporting another
- Handling of missing data points
- Outlier handling and exclusion
- Data smoothing
- Range of accurate measurement
- Precision of data recording
- Data transfer, custody, accessibility

THE GLOBAL STANDARD FOR LIVESTOCK DATA

Network. Guidelines. Certification.

The Future of Milk Recording

What is Needed?

- Total System Approach
- Focus on Data for Management Purposes and then Assess Usability for Official Programs
- ICAR Guidelines & Protocols for Automatic Recording – Animal ID, Data Capture & Data Editing
- Innovative System Testing and Certification by ICAR
- Continuous Monitoring of Systems for Quality Assurance
- Flexibility in Data Transfer, Packaging and Delivery by MROs
- Active Device Manufacturer Engagement