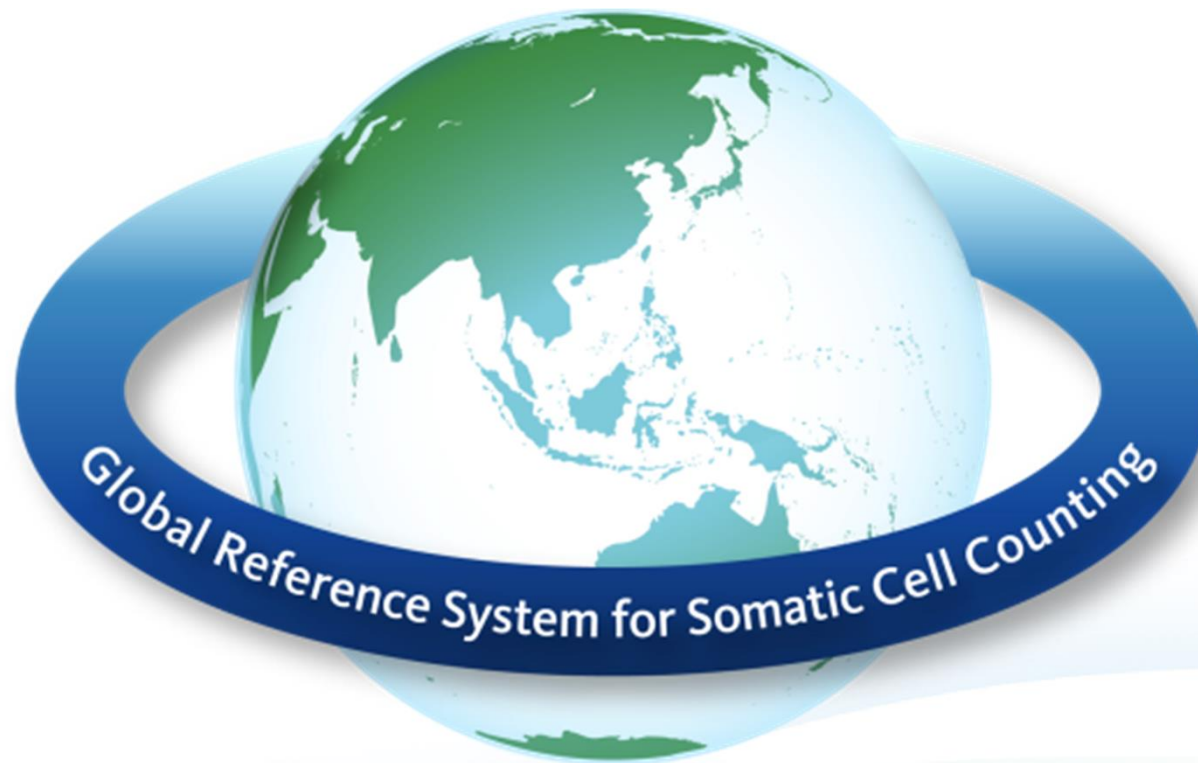


ICAR and IDF closing the gap in global equivalence with somatic cell counting in milk



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On the behalf of RSSCC group



THE GLOBAL STANDARD
FOR LIVESTOCK DATA
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Aotea Centre
Auckland,
New Zealand



Drivers for analytical equivalence

When goods are moving, analytical results must agree

- Across jurisdictions
- Across methods
- Over time



Traceability is key for:

- A valid outcome of analytical work
- A uniform expression and use of results

Equivalence.....anywhere, anytime, anyway!!

Somatic cell count

Relevant in:

- Food legislation
- Payment of raw milk
- Farm management decisions and breeding programs

REGULATION (EC) No 853/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 29 April 2004
laying down specific hygiene rules for food of animal origin



Millions of measurements per year in:

- Herd bulk milk samples
- Individual animal samples

Somatic cell counting methods

Defining method (DMSCC) (ISO 13366-1 | IDF 148-1)

- + Direct microscopic count
- Analyte poorly defined
- Laborious, cumbersome
- Requires well-trained analysts
- Poor precision

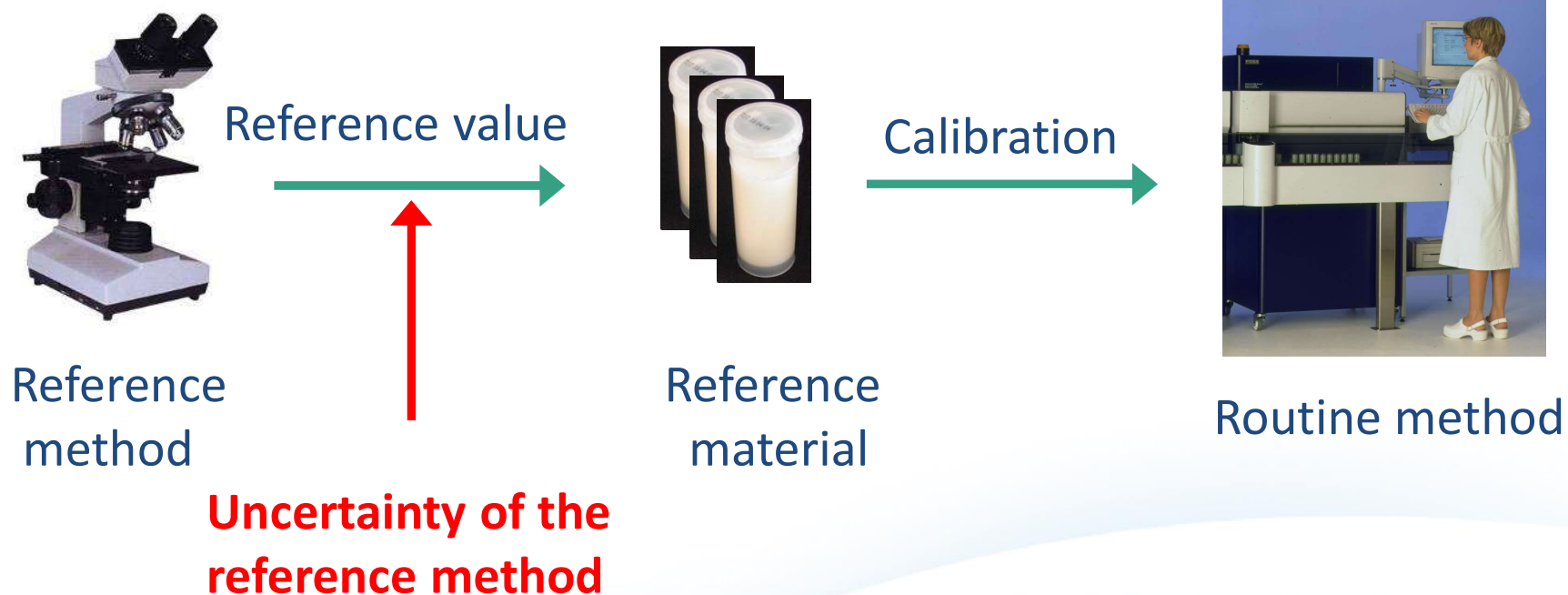


Routine methods (ISO 13366-2 | IDF 148-2)

- + Automated, user-friendly
- + High throughput
- + High precision
- Needs reference



Where the traditional calibration approach lacks robustness...



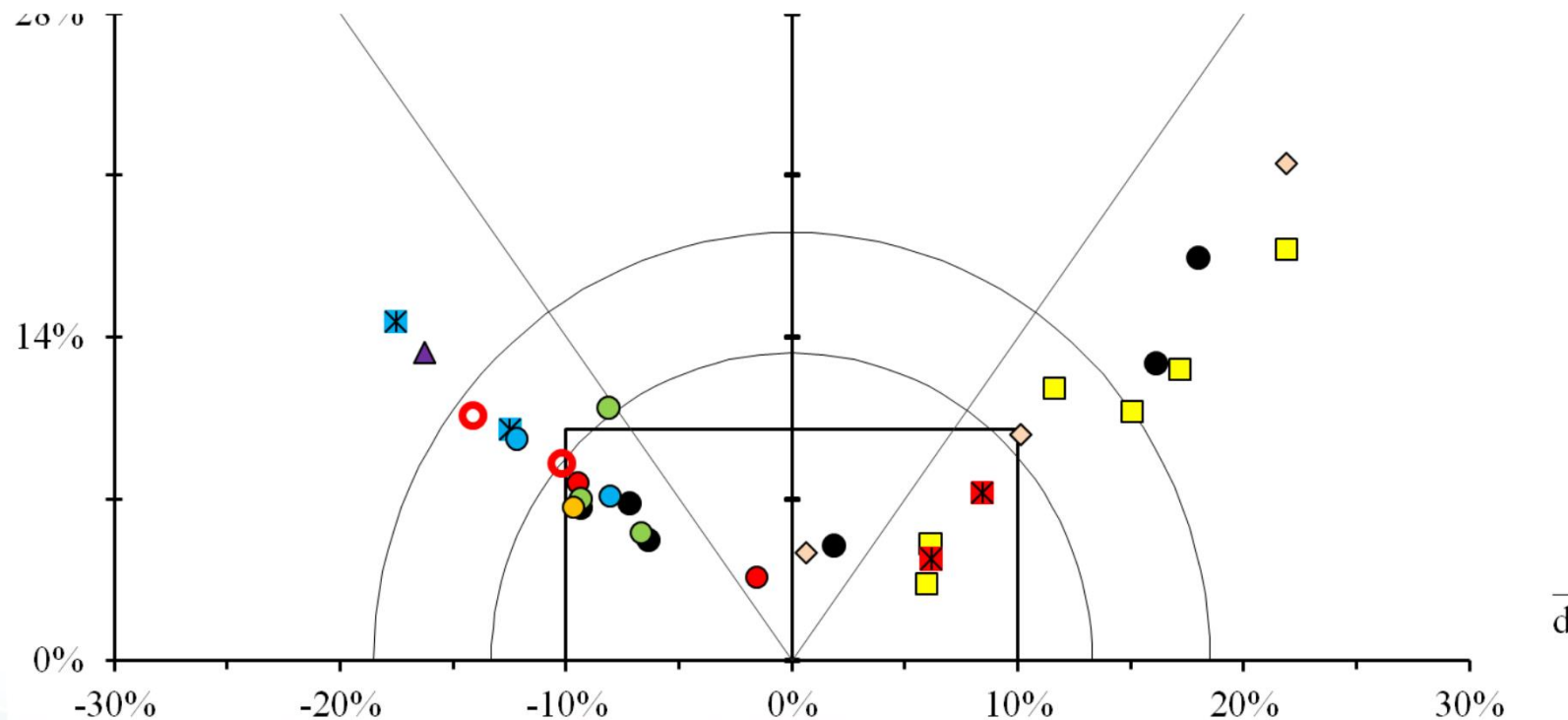
Applied anchoring strategies by labs

- Using Secondary Reference Materials (> 20 providers)
- Using in-house prepared SRM, characterized with reference method analysis....and smoothening variation by including routine method results
- Relying on the instrument manufacturer's settings and checking consistency with proficiency testing results
- Adapting on the outcome of proficiency testing

Actually, SCC is a huge ship, sailing with many anchors!

Applied anchoring strategies by labs

ICAR Proficiency Test



Reference system

A well-structured anchoring system fed by different types of information (reference method results, routine method results, proficiency testing results) from sources with traceable competence, accepted by users and recognized/approved by competent authorities.

Bulletin of the International Dairy Federation 427/2008

Towards a Reference System for
Somatic Cell Counting in Milk

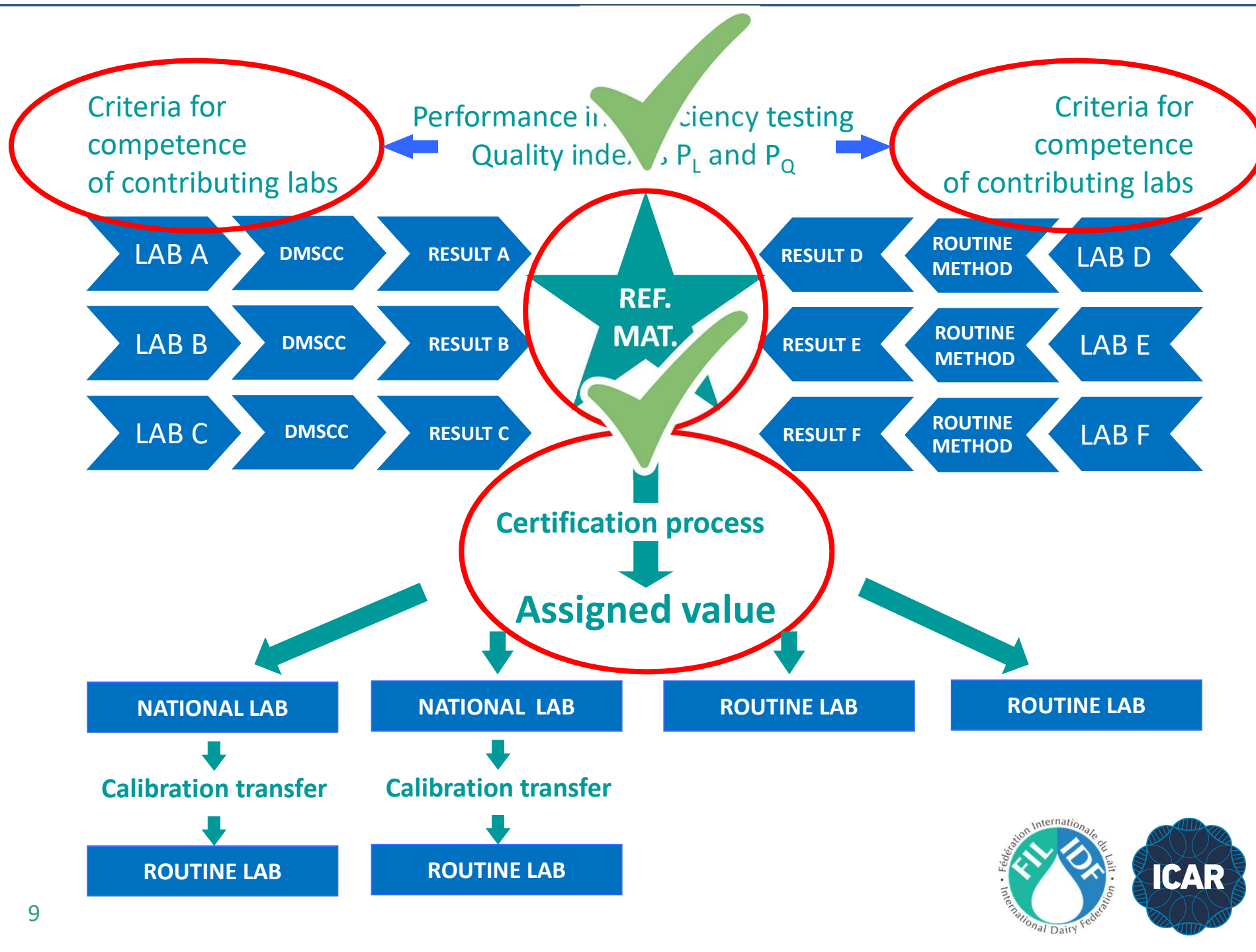
2. Architecture of reference systems, status quo of Somatic Cell Counting and concept for the implementation of a reference system for Somatic Cell Counting

C. Baumgartner¹

Summary

The definition of "reference" relates to two meanings. One relates to "testimonial", "endorsement" or "certification", the other to the aspect of "information", "evidence" or "source". These notions are a good description of the purpose of reference systems, which are intended to complement and improve the traditional way of calibration of routine methods.





New primary reference material

- Spray-dried skim milk, produced by EU JRC/NIZO
- High count sample, low count sample
- 15 g per bottle, to be reconstituted with water
- Being tested on commutability, homogeneity, stability
- Reference values to be assigned in late 2018 based on reference method results and alternative method results
- Optimism about long term stability
- Available from Spring 2019

Implementation and future functioning

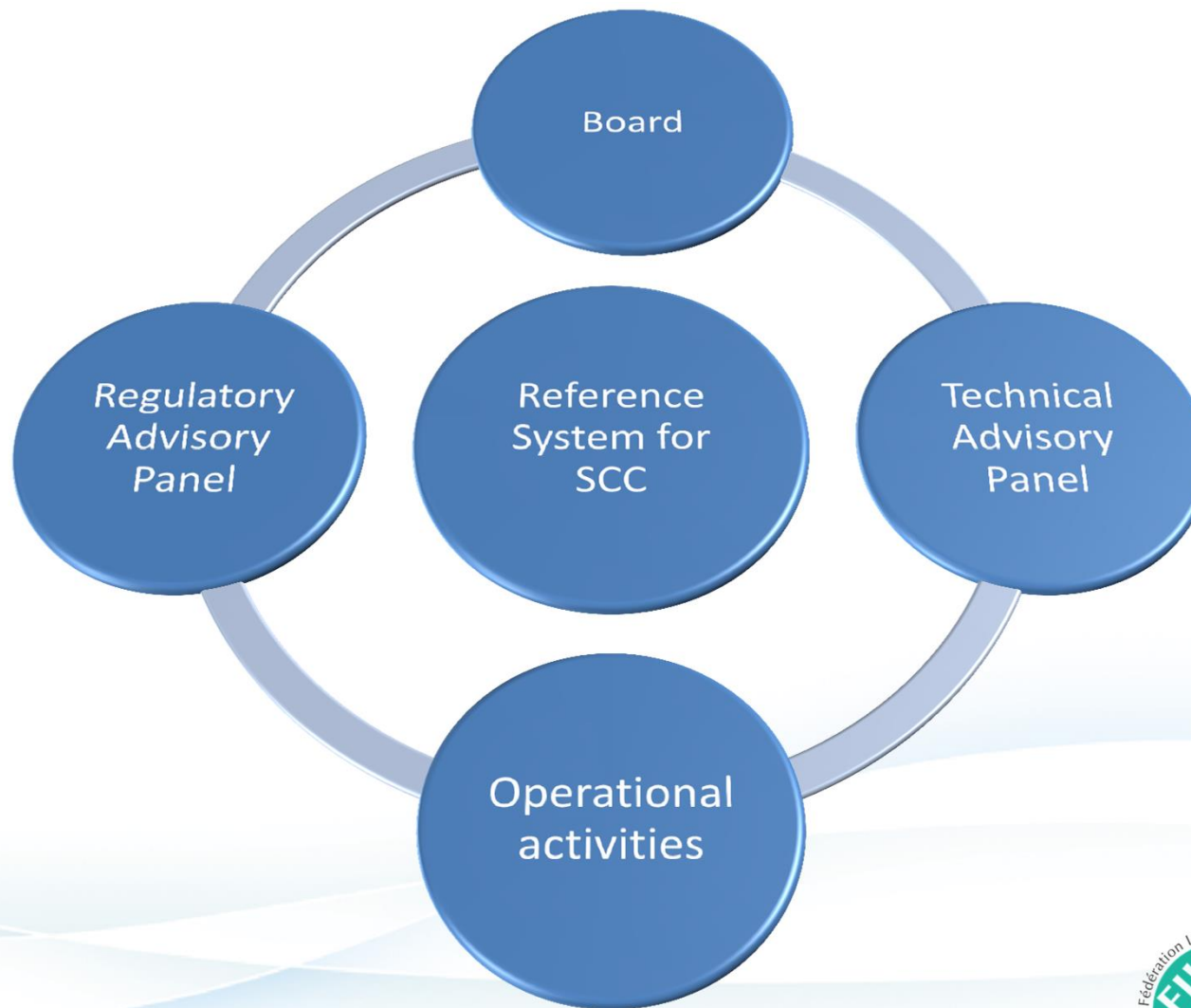
Cooperation needs a structure!



- International organizations (dairy, animal recording)
- Regulators and regulatory supervisors
- Reference material providers
- PT organizers
- Reference/pivot laboratories
- Routine laboratories
- Instrument manufacturers



NeuBo



NeuBo mission



Promoting and supporting optimal equivalence in analytical results for the dairy sector worldwide through the application of international standards and guidelines, reference materials, reference systems and participation in proficiency testing in an integrated, robust, neutral and non-commercial structure.

Proposed functions/roles for NeuBo (1)

Implementing the Reference System for SCC

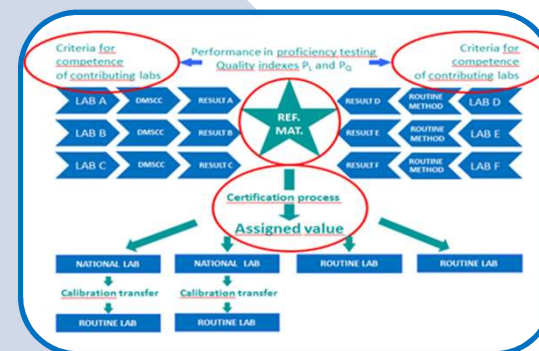
- Coordinating the characterization of Primary Reference Material
- Monitoring and safeguarding the functioning of the reference system for SCC

This will include the creation and maintenance of a database with information provided by participants in confidentiality.

Database



PT information



Proposed functions/roles for NeuBo (2)

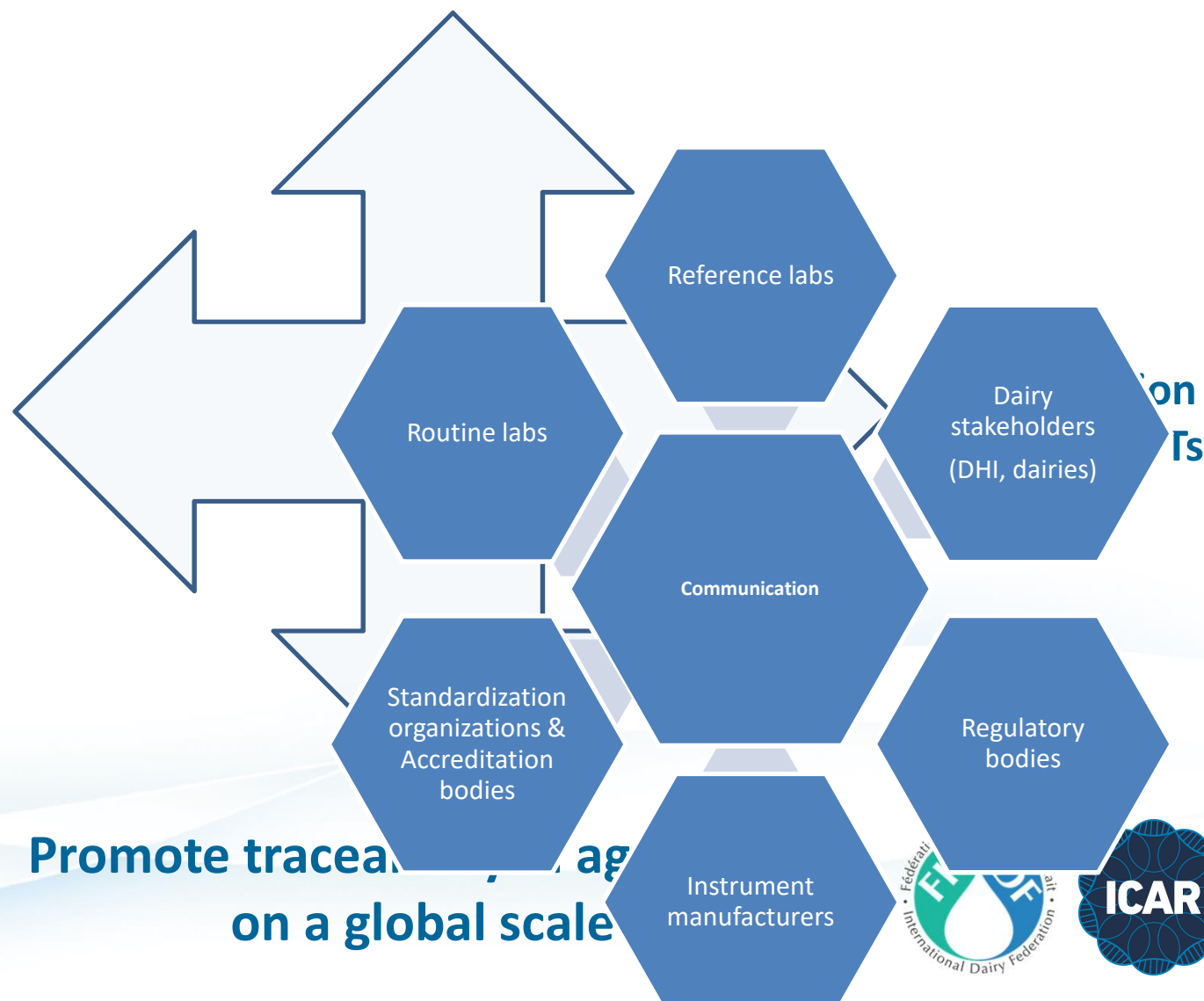
Communication Platform



Communication platform will provide

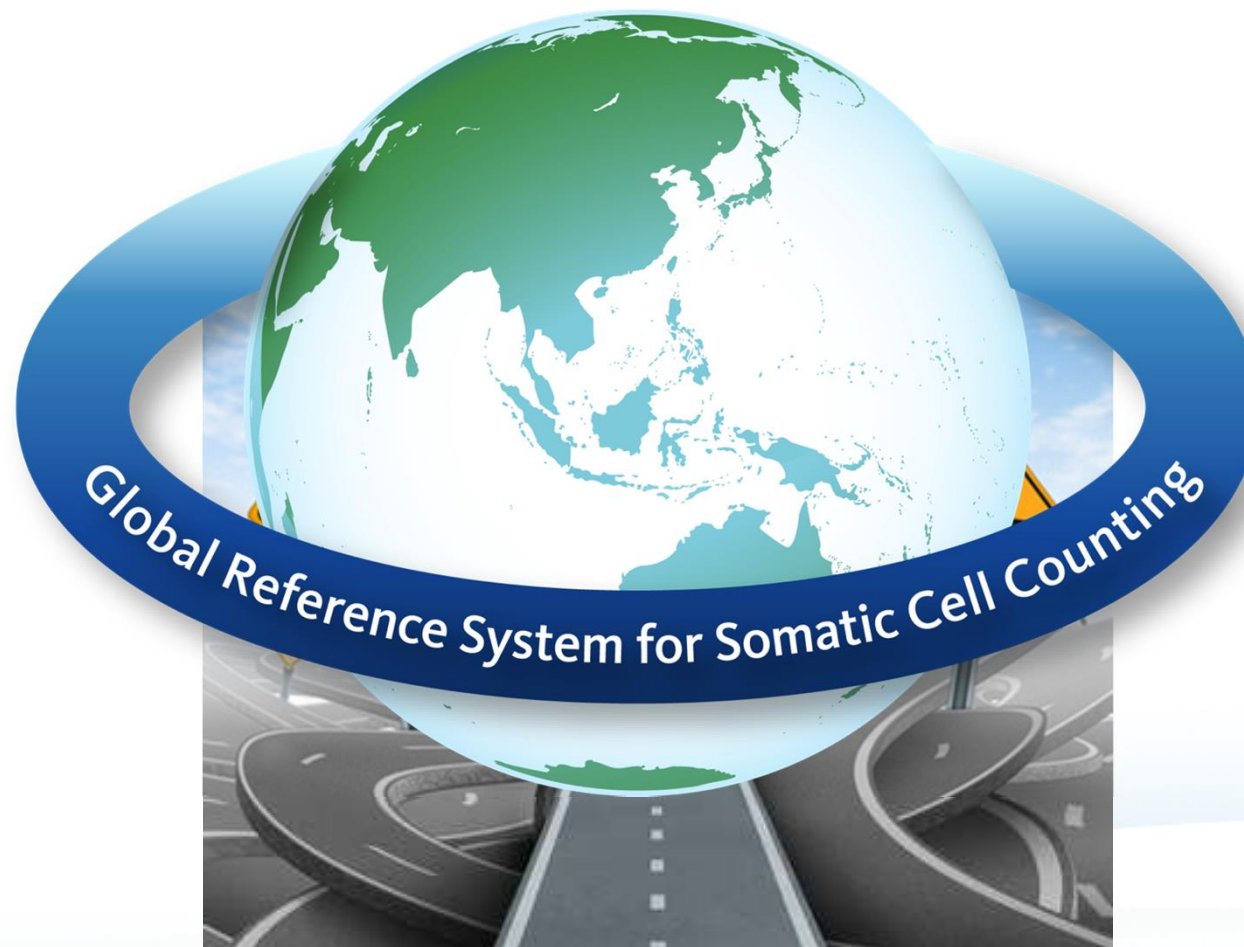
Dissemination of information

Advice and neutral
consultancy services



Promote traceability and safety
on a global scale





.....Thank you for your attention!

