



Interbull Business Meeting 2

22 June 2025



THE GLOBAL STANDARD
FOR LIVESTOCK DATA

Network. Guidelines. Certification.



Interbull Business Meeting 2

Matthew Shaffer

Interbull Steering Committee Chair



THE GLOBAL STANDARD
FOR LIVESTOCK DATA

Network. Guidelines. Certification.

Welcome

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2025 Interbull Business Meeting





House Keeping

- Please silence your mobile phones
- Please use the microphone and state your name
- Official Delegates, please sign your name on the paper



Business Meeting Agenda

Meeting 1

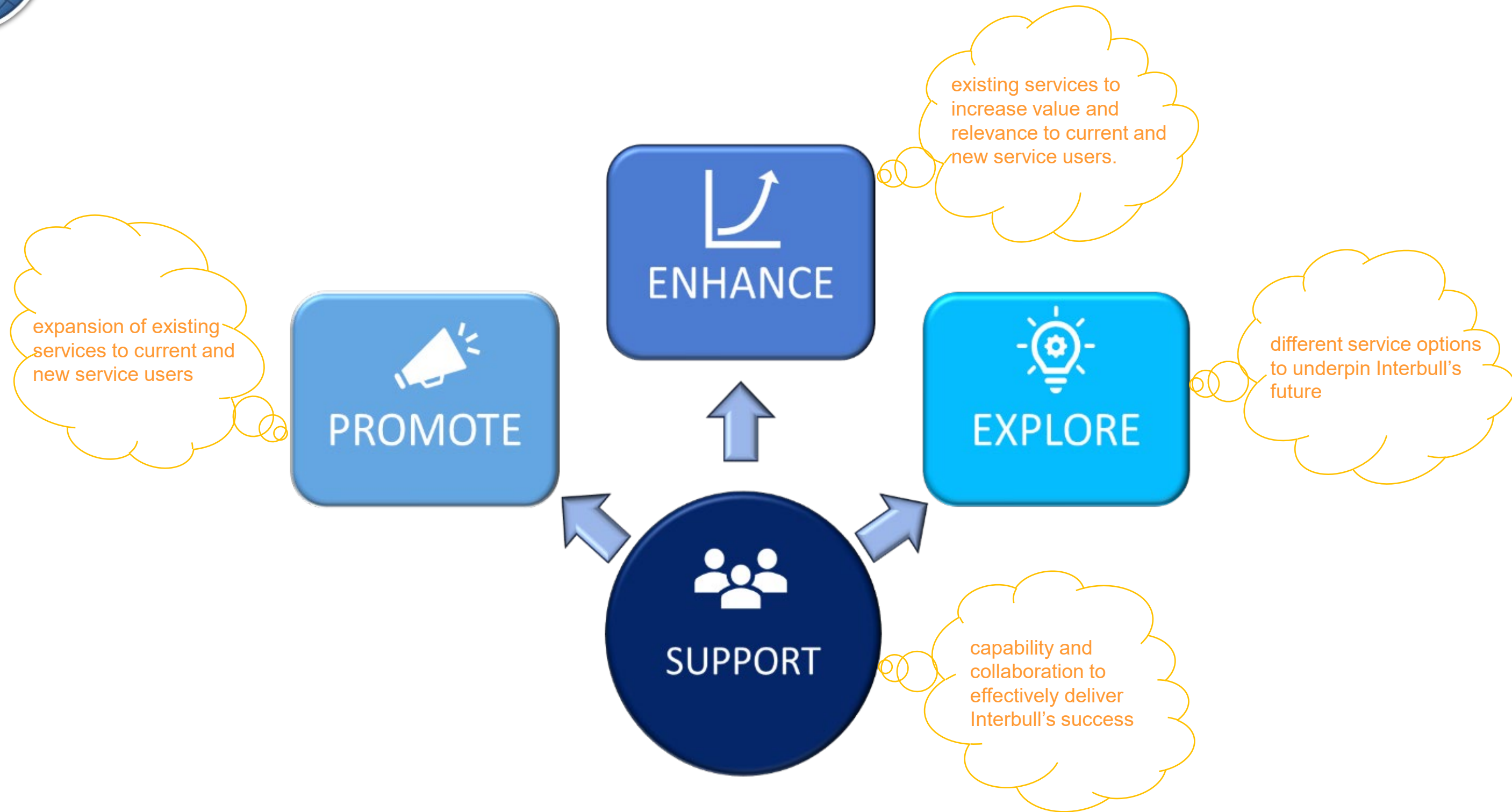
1. Opening and welcome
2. Adoption of agenda
3. Minutes 2024 Interbull Business Meeting
4. ICAR Update
5. Interbull Chair's Report
6. Interbull Governance
7. Interbull Business Funding Models
8. Interbull Centre Director's Report
9. Discussion
10. Close Business Meeting 1

Meeting 2

11. Welcome back
12. Interbull Technical Committee Update
13. Interbull Research & Development Update
14. ICAR DNA WG and Interbull DataHub
15. ICAR Feed & Gas WG
16. ICAR Interbeef WG
17. Other Matters and Open Discussion
18. Future Events
19. Close



Interbull Strategic Plan 2024-2026





Interbull Business Meeting

Item 11. Welcome Back

Matt Shaffer



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Interbull Business Meeting

Item 12. Interbull Technical Committee Update

Gerben de Jong

ITC Chair



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The Interbull Technical Committee





ITC responsibilities (CoP 4.4)

- **Identify and review technical steps** that need to be taken to ensure that an **efficient service of high quality** is delivered to countries participating in the international genetic evaluations provided by Interbull and to **support the continuous development** of the service.
- Make **decisions** on methodological issues that may impact evaluation results.
- Make **recommendations** to the Interbull Steering Committee on methodological issues of such importance that they may affect the service as a whole.



ITC Groups

4 Groups reporting to the ITC to work on specific objectives:

1. Validation

A. Legarra (chair), P. Sullivan, Z. Liu, R. Mrode, V. Palucci

2. Genomic Reliability

Z. Liu (chair), M. Lidauer, P. VanRaden, I. Strandén, J. Vandenplas, H. Eding, K. Haugaard

3. MACE Coding

R. Mrode (Chair), J. Jaitner, M. van Pelt, R. Finocchiario, K. Haugaard

4. Future MACE

P. Sullivan (Chair), G. de Jong, I. Strandén, H. Gao, V. Palucci



ITC Groups – Update ^(1/3)

1. Validation

- ✓ Developing a Test-III alternative more suitable with current data structure
- ✓ Recommendations to SC for validation requirements for novel traits

2. Genomic Reliability

- ✓ Applicability to small breeds and new traits
- ✓ Beef-on-Dairy application



ITC Groups – Update (2/3)

3. MACE Coding WG

- ✓ Codes for *Status of bull* & *Type of Proofs* unchanged since the beginning
- ✓ Need for *Review & Clarification*
- ✓ Recommendations have been approved by SC, implementation September 2026

New MACE Definitions

Codes for types of proof

- 00 (unknown or other);
- 11 (based on first crop sampling daughters or used based on genomics);
- 12 (based on first and second crop daughters);
- 21(based on imported semen of proven bull, second crop daughters only);

Codes for status of bull

- 00(unknown or other);
- 10(unrestricted use of AI bulls);

Codes for Publication Rules

- Y (if bull proof meets national standards for official publication in the country sending information.);
- N (otherwise).



ITC Groups – Update (3/3)

4. Future MACE

- ✓ Estimate and apply VC estimates on real MACE data
 - ✓ Assess impact on results
- ✓ Apply GPS-MACE
- ✓ Present results to ITC/SC and Interbull community, including implementation plan, to collect feedback on implementation timing etc.



ITC Recommendations Approved

The SC has approved the following ITC recommendations:

➤ Fertility harmonization

https://interbull.org/web/static/web/Harmonisation_female_fertility_traits_MACE.pdf

➤ Service Schedule:

New MACE service schedule starting from August 2025:

- ❖ Data reception set on Monday
- ❖ Pre-release set on (following) Monday

Additional test run in May

➤ GEBV test:

Mandatory 2 years GEBVtest validation for GMACE

21/07/2025	MON	Data reception: Pedigrees, EBVs for MACE & SNP data for InterGenomics	MACE, GMACE & InterGenomics AUGUST Routine Run N.B. New schedule for data reception and MACE pre-release
28/07/2025	MON	MACE pre-release & Data reception: GEBVs for GMACE & file734	
31/07/2025	THU	InterGenomics (genotype-related files) pre-release results	
05/08/2025	TUE	GMACE & InterGenomics (genomic-related files) pre-release results	
12/08/2025	TUE	Official release: MACE, GMACE and InterGenomics	



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Item 12. Interbull Technical Committee Update

Gerben de Jong



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Item 13. Interbull Research and Development Update

Valentina Palucci

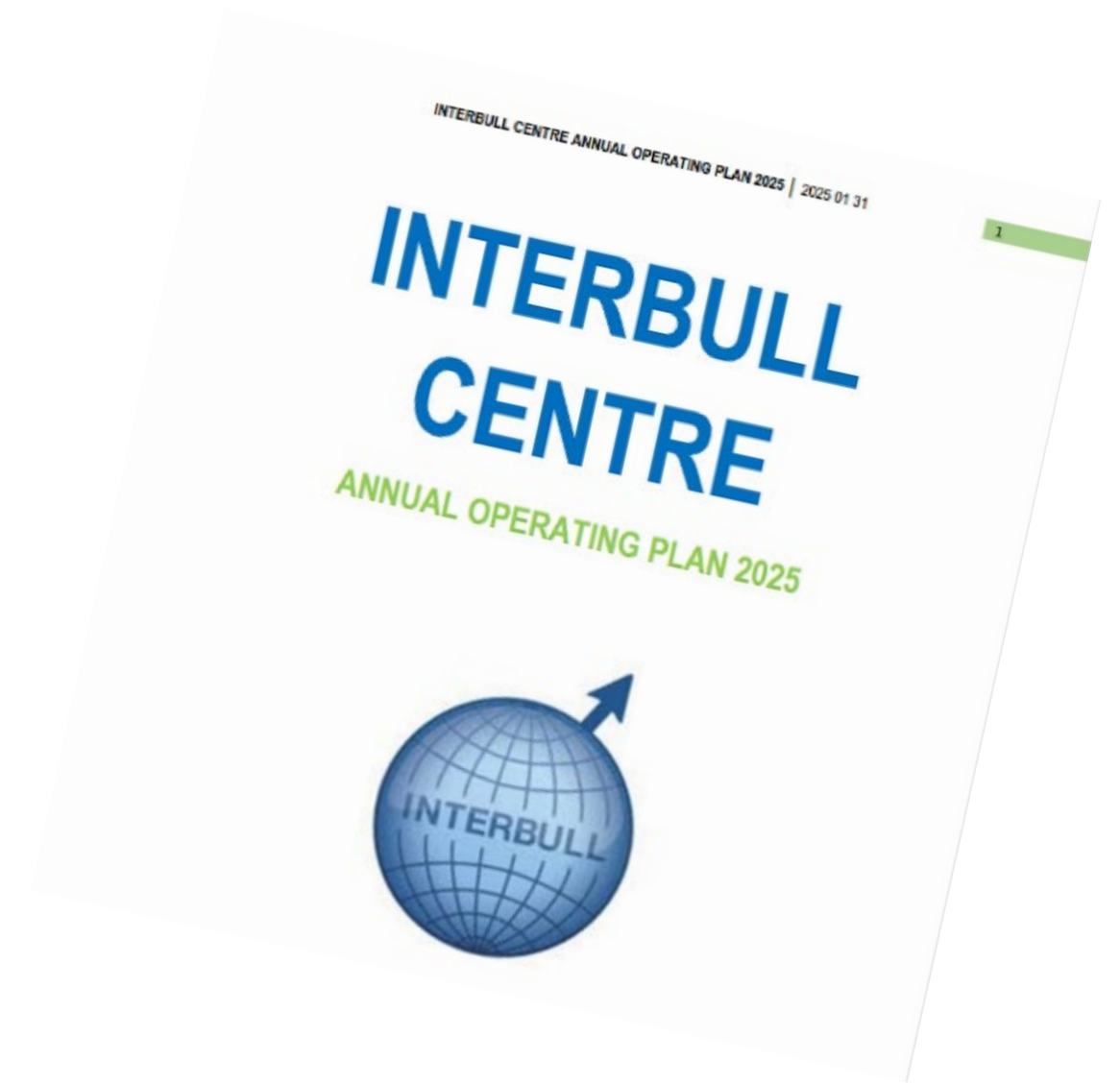
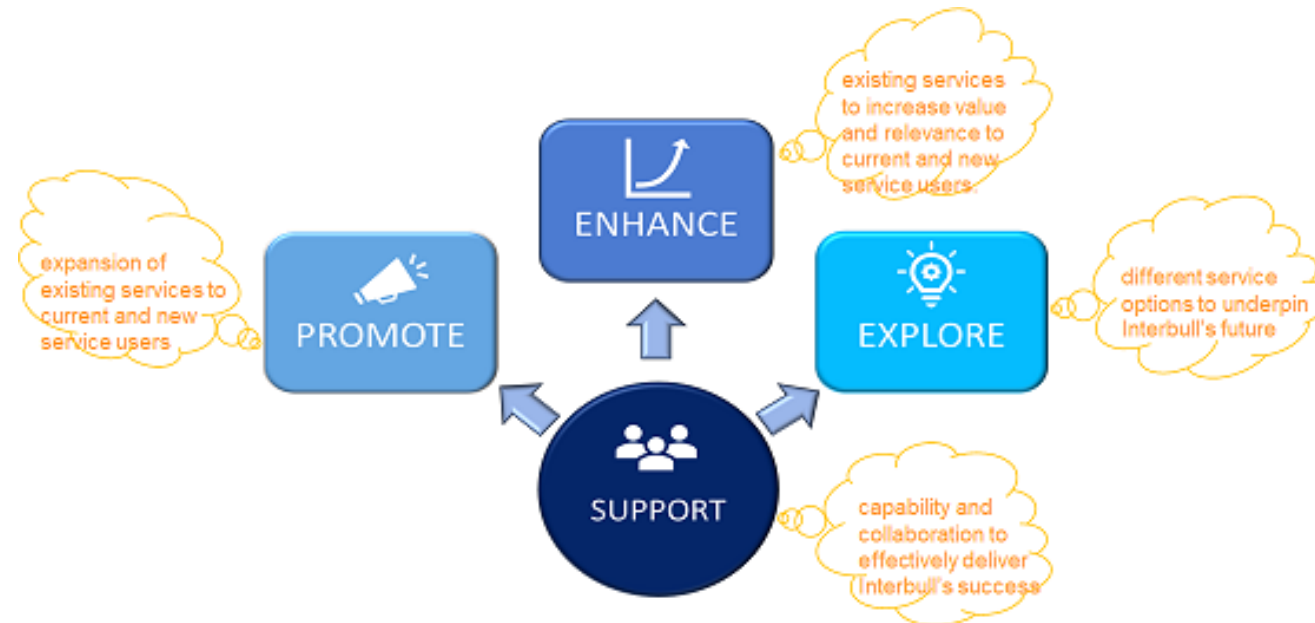


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Current R&D

- ✓ Defined in the 2025 Annual Operating Plan
- ✓ Activities according to our four strategic priorities





Current R&D

....Besides what already presented in the ITC update...

- Females in MACE
- Improve PREP db
- Pedigree on request
- Improve GDE user-ability



Females in MACE

Session IV - Meta-analysis & Big Data: Julius Mugambe presentation



- Research request put forward by the World Ayrshire Federation
 - Find ways to improve the genomic selection of the breed
 - Find ways to take advantage of females' data currently available (EBVs, pedigree, genotypes)
- SC considered the project useful also to other small populations (i.e. GUE, IG-HOL)
- Three phases of the project defined:
 1. Immediate Action: Open GenoEx-GDE to other breeds
 - Facilitate sharing males & females genotypes
 - Apply the Interbull conversion equations to get cow MACE proofs-like for their foreign cows EBVs
 - Valuable mostly for bigger participating countries, with a genomic evaluation in place



Females in MACE

2. Intermediate Action I: Include females into MACE

- Research agreement and data call issued
- MACE EBVs for all animals (bulls & cows)
- Will require adjustment of current MACE pipeline (de-regression, MACE model, etc.),
- Check on correctness of data of males vs. females (double counting bias?)
- Valuable to all participating countries

Timeline: July 2026

Regular Updates: every 3 months

3. Intermediate Action II: Include females into InterGenomics

- Provide international GEBV to all countries
- Valuable to all participating countries



Improving PREPdb

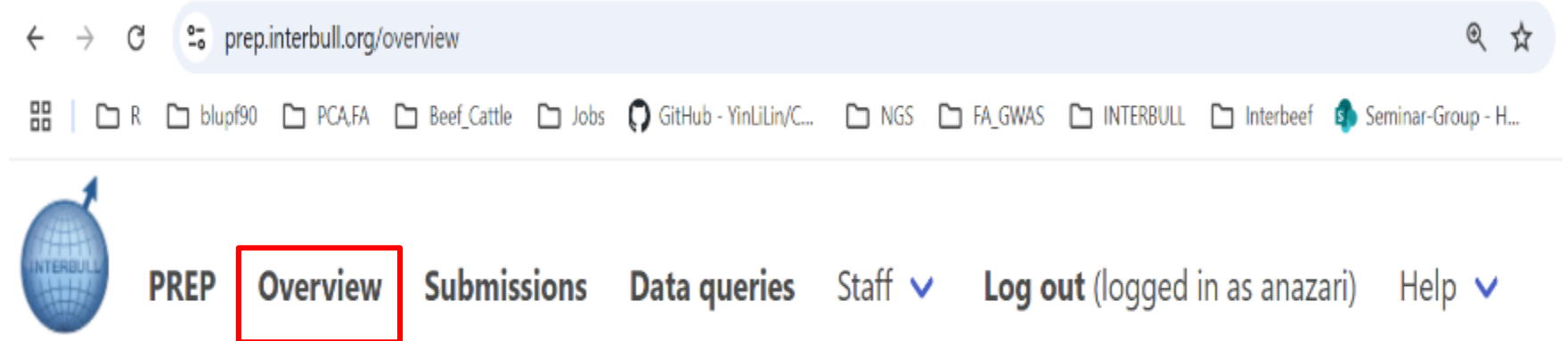
- ❖ Working on improving the *Query* functionality:
 1. Improving its structure
 2. Expand it with the newest forms added (longevity, udder health, workability)
 3. Fetch original reports
- ❖ Expand its content to display information for organisations not involved in international evaluations
 1. Display information regarding E.U. Competent Authorities and different breed organisations in a given country

<https://prep.interbull.org/>



Improving PREPdb

- Genomic form is now available on PREPdb under *Overview* → *Genomic form*.
- Current form has been developed and populated for 23 organisations with the essential questions.
- The form needs to be completed and/or updated by each organisation.



Other Traits

Provide information for additional traits to be considered for expansion of the Interbull portfolio (for dairy or Beef evaluations)

Latest submission: 2024-11-07 14:14:43

Submissions (total): 343

[View all submissions](#)

[View latest submissions](#)

<https://prep.interbull.org/>



Pedigree on Request

- ❖ Several requests from different users to have access to the IDEEA pedigree
 1. More often than 3 times/year -> useful for genotype exchange
 2. Pedigree of young animals for breeds not included in any genomic evaluations
- ❖ Proposal approved by SC, details and information on timeline will follow



Improve GenoEx-GDE User-ability

❖ Continuously improving the platform to:

1. Increase visibility for a given job

- Add information on the queueing status of the job (uploaded/downloaded)

2. Improve content of downloaded file711 (permission file)

- Include permission information for all requested genotypes, whether they are explicitly shared with other organisations or not



R&D: Completed

➤ GEBV test Software

- ❖ Mandatory validation for countries participating with GEBVs to GMACE
 - ❖ Genomic validation now in line with conventional validation
- ❖ New software version released with:
 - ❖ More lenient threshold ($\pm 25\%$) applied for all *NON-PRODUCTION* traits
 - ❖ Results labeled with *WARNING* -> Data included in evaluation **but** require investigation by countries
 - ❖ Documentation updated
 - ❖ Clarification on which software's criteria to use for an official Interbull validation

TARGET = DGEV
WEIGHT= Interbull weighted regression test
FOREIGN BULL = N
BASE ADJUSTMENT= EBV



Interbull Business Meeting

Item 13. Interbull Research and Development Update

Valentina Palucci



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Item 14. ICAR DNA WG and Interbull DataHub

Katrine Haugaard



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ICAR DNA WG

Chair

- Romy Morrin-O'Donnell (Weatherbys, Ireland)

Members

- Lucia Borreguero Escribano (Central Veterinary Laboratory, Ministry of Agriculture, Fisheries and Food, Spain)
- Johan De Meulemeester (Merck, USA)
- André Eggen (Illumina, France)
- Marta Gozdek (PFHBiPM, Poland)
- Suzanne Harding (Holstein UK, United Kingdom)
- Katrine Haugaard (Interbull Centre, Sweden)
- Matthew McClure (ABS-Global, USA)
- Nilesh Nayee (NDDB, India)
- Ezequiel Nicolazzi (CDCB, USA)
- Clotilde Patry (ALLICE, France)
- Jiansheng Qiu (Neogen Genomics, USA)



ICAR DNA WG

Objectives

1: Forum

Collaboration, information
exchange

2: Guidelines

Lab techniques, data
analysis and tools

3: Surveys

Periodic international
surveys

4: Services

Certification of system for
use of DNA

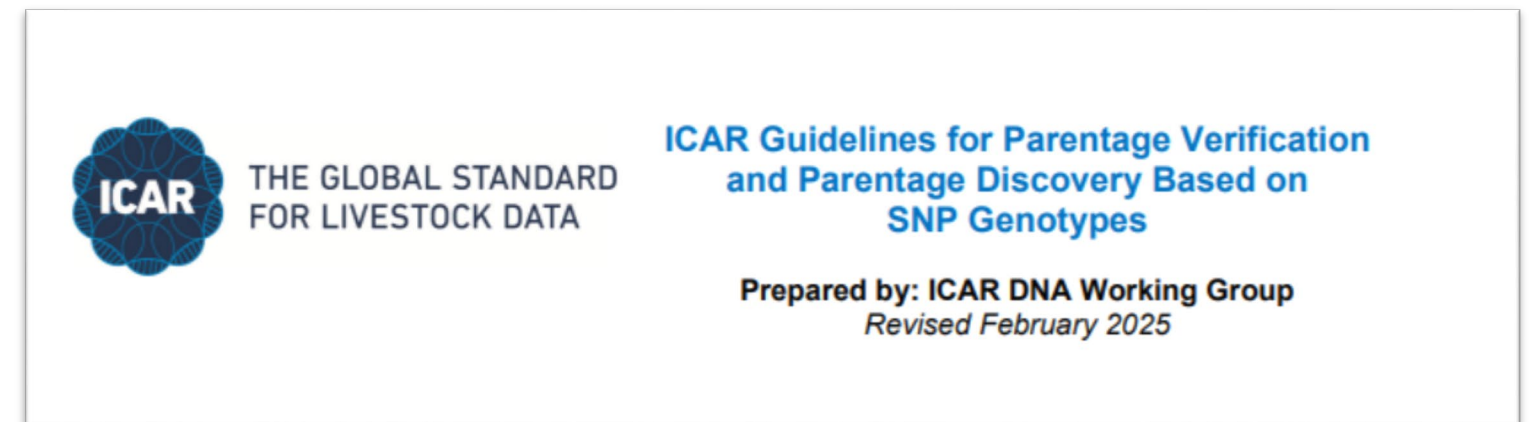
5: Innovation

International collaboration
in research and
development



ICAR DNA WG

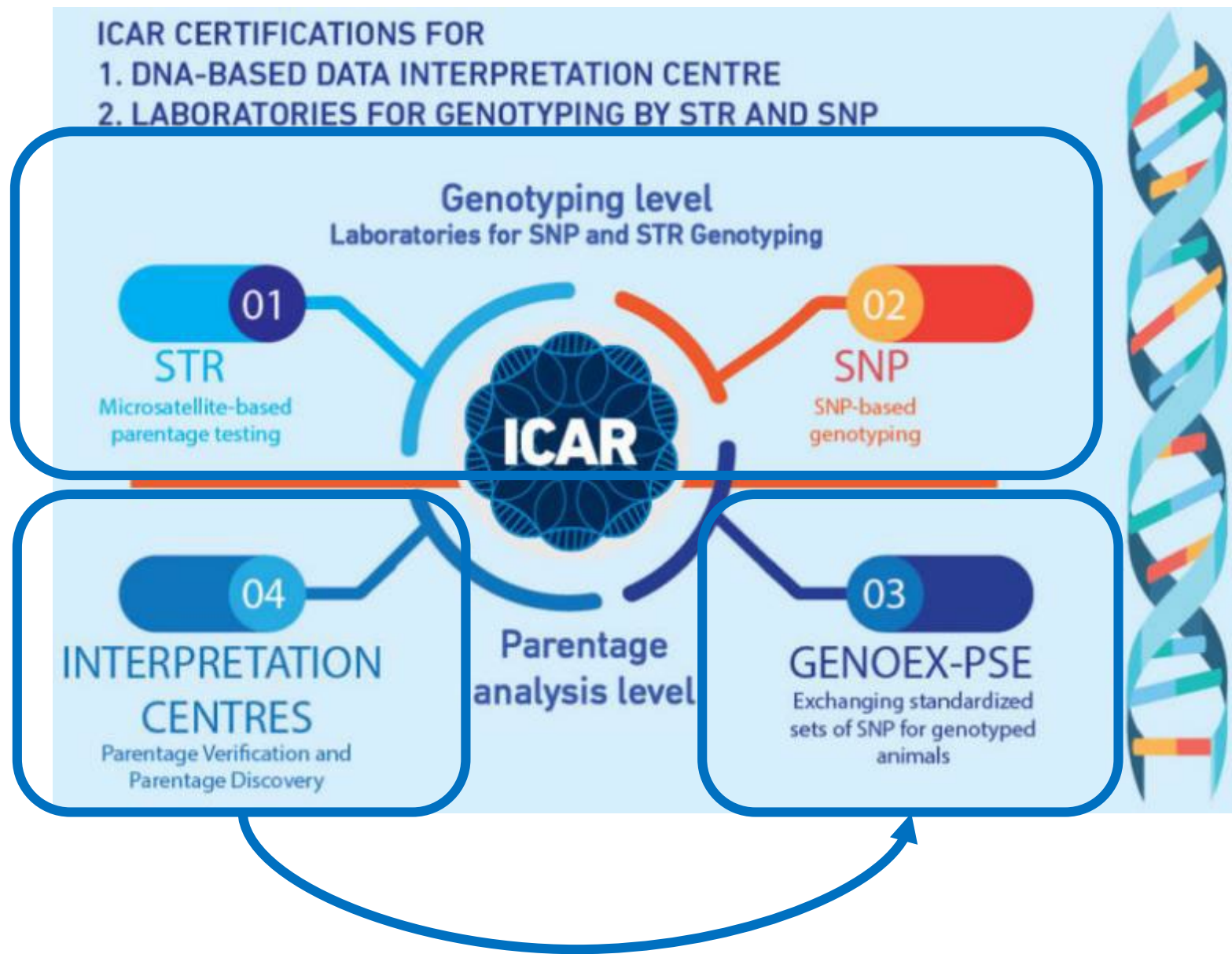
- Section 4 of ICAR guidelines
 - DNA Technology
- Guidelines for parentage verification and parentage discovery based on SNP genotypes
- Certifications



Focus currently mostly on cattle;
investigating possibilities to address other species.



ICAR Certification for DNA Data Interpretation Centres



- Parentage Verification
- Parentage Discovery
- Valid for 2 years
- Interbull Centre responsible for the technical component
 - Sending out test files
 - Receiving and reviewing result files
- 2024/2025: review of the Parentage Discovery process
- Pre-requisite for joining GenoEx-PSE



ICAR DNA WG and Interbull DataHub



Easy exchange of SNPs between multiple partners

PSE: Parentage SNP Exchange

Exchange of SNPs for:
Parentage Verification

- 200 SNPs defined by ISAG
- Parentage Discovery
- 354 SNPs defined by DNA WG

GDE: Genotype Data Exchange

Exchange of full array genotypes for
genomic selection purposes

- Low, medium and high density
- Commercial and customized
- InterGenomics
- New Service, independent from International evaluations (eg. Ayrshire)



ICAR certification and GenoEx

Country	Organisation	Certified PV	GenoEx-PSE (PV)	Certified PD	GenoEx-PSE (PD)
Denmark	Seges	√	√	√	√
Germany	vit	√	√	√	√
Ireland	ICBF	√	√		
Italy	ANAFI	√	√		
Italy	ANAPRI	√	√		
Japan	LIA	√	√		
Netherlands	CRV	√	√		
Norway	Geno	√	√		
Slovenia	AIS	√	√		

Currently a total of 25 orgs certified for Parentage Verification and 7 for Parentage Discovery.
Full list of certified organisations available at icar.org

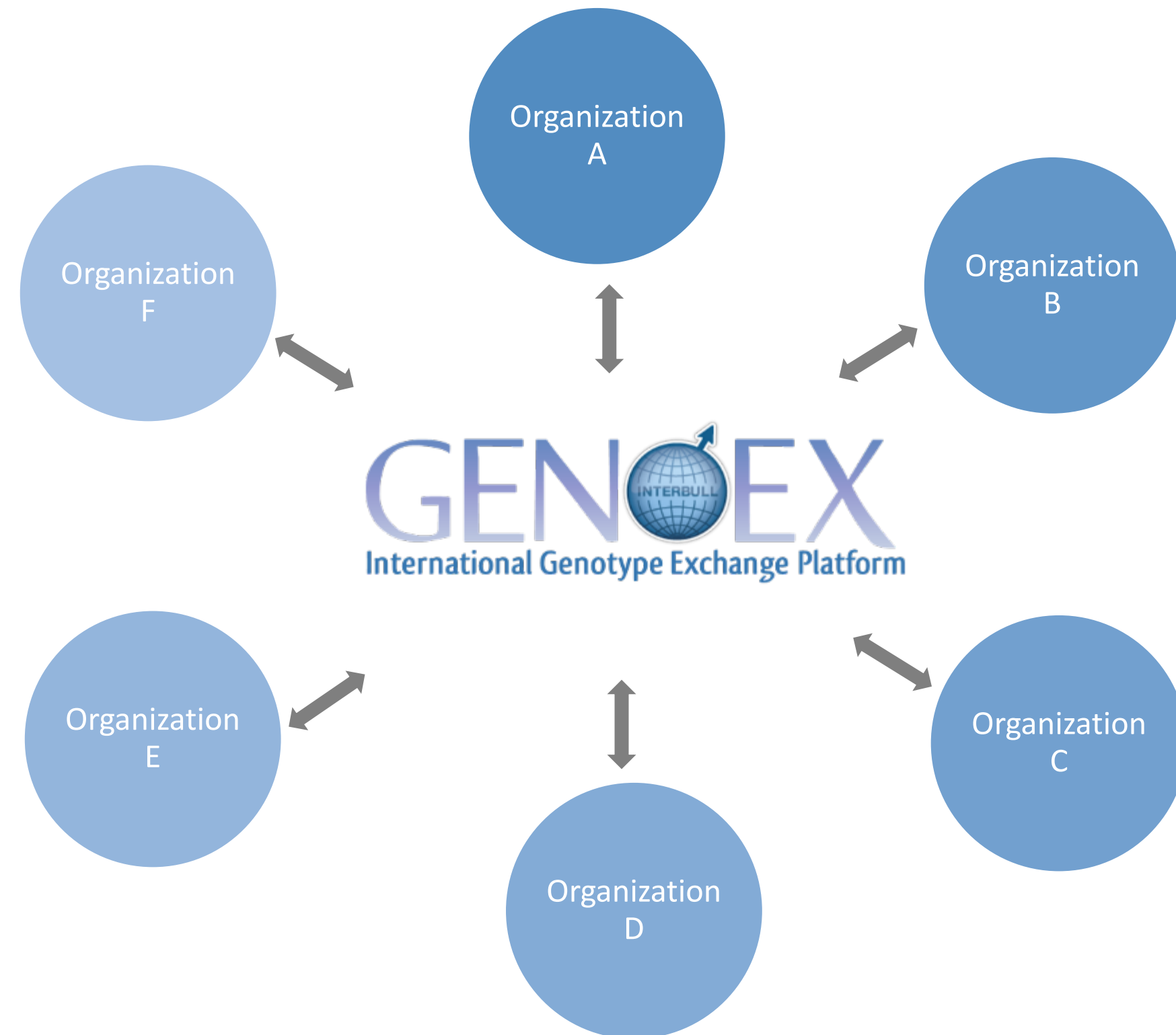


GENEX
Genomic Data Exchange

GenoEx-GDE

Current use in cattle:

- Pooling of genotypes for Interbull's international genomic evaluation (InterGenomics)
- Imputed genotypes provided back to the participants of international evaluation
- Opening for sharing of genotypes through User Groups, independent from Interbull/Interbeef Evaluations.





Genetic Traits


DNA WG paper


“Understanding Genetics and Complete Genetic Disease and Trait Definition”

ICBF, 2016

- BWYPEX: Colin Lynch (Lactanet)
 - “Discovery, approval and management of genetic abnormalities in cattle”

Useful documents

 [Understanding Genetics and Complete Genetic Disease and Trait Definition \(Expanded edition\)](#)

 [Understanding Genetics and Complete Genetic Disease and Trait Definition \(Condensed edition\)](#)

<https://www.icar.org/group/working-group-dna/>



Genetic Traits

Genetic Traits Exchange through Interbull DataHub:

- Sharing information on monogenetics traits in an effective way
- Facilitates for resolving conflicts
- In service for BSW (5 organisations) and Holstein (3 organisations)
 - BSW: CAN, CHE, DEA, ITA, USA
 - HOL: CAN, ITA, NLD, GBR
- Service can be expanded to other breeds
- Collaboration breed associations and relevant ICAR WGs



Interbull Business Meeting

Item 14. ICAR DNA WG and Interbull DataHub

Katrine Haugaard



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Item 15. ICAR Feed & Gas WG

Rasmus Bak Stephanson



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ICAR Feed&Gas Working Group

R. B. Stephansen, C. F. Baes , K. A. Bakke , L. Benzoni , R. Finocchiaro, M. Frizzarin, N. Krattenmacher,
J. Lassen, J.E. Pryce, C. Richardson, & B. Gredler-Grandl

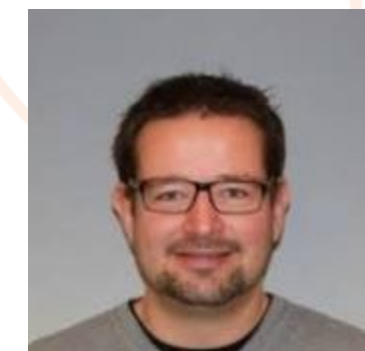
Interbull Business
Meeting



22nd June, 2025
Louisville, KY, USA

11 members

- Christine Baes (UoG, Canada)
- Karoline Bakke (Geno, Norway)
- Lorenzo Benzoni (ANAFIBJ, Italy)
- Raffaella Finocchiaro (ANAFIBJ, Italy)
- Maria Frizzarin (AgroScope, Switzerland)
- Birgit Gredler-Grandl (WUR, Netherlands, chair)
- Nina Krattenmacher (CAU, Germany)
- Jan Lassen (VikingGenetics, Denmark)
- Jennie Pryce (AgVic, Australia)
- Caeli Richardson (AbacusBio, UK)
- Rasmus Bak Stephansen (AU, Denmark)



Core objectives

Forum to exchange,
collaborate, learn from
each other



Promote and develop
system for data
storage and genetic
evaluation

Maintain
update, promote and
extent guidelines for
cattle, sheep, goats

**FEED INTAKE
METHANE EMISSION**

Facilitate international
collaboration in
research and
development

Periodic international
services



Webinars, workshops;
Reach out to
manufacturers


Webinars & SOPs workshops

- Large scale recording of feed intake on commercial farms (2023)
<https://www.icar.org/webinar/webinar-march-2023-on-large-scale-recording-of-feed-intake-in-dairy-cattle-on-commercial-farms/>
- MIR to predict methane emission (2024)
<https://www.icar.org/webinar/webinar-on-using-mir-to-predict-methane-emissions/>
- Sniffer & GreenFeed SOP 2023
ICAR conference contribution

- **ICAR Wiki:** <https://wiki.icar.org/index.php/Guidelines>

Section 20: Methane emissions for genetic evaluations

ICAR WIKI



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Anonymous

Section 20 – Methane Emission for Genetic Evaluation

Page

Discussion

View source

History

This is the approved revision of this page; it is not the most recent. [View the most recent revision.](#)

NOTE: This version of Section 20 has been approved by the working group's Chair. Please be aware that further revisions may occur before final review and approval by the Board and ICAR members per the [Approval of Page Process](#).

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2 Disclaimer

3 Scope

4 Sub-sections

5 Summary of Changes

6 References

- ICAR Wiki: <https://wiki.icar.org/index.php/Guidelines>

Section 20: Methane emissions for genetic evaluations

4 Sub-sections

Definition and Terminology

Methane determining factors

Methane measurements methods

Discussion of methods

Comparison of methods to measure methane

Sniffer SOP
GreenFeed SOP
PAC
LMD

Proxies

Proxies discussion

Merging and sharing data in genetic evaluations

Ongoing activities

Recomendations

Conclusions

Projects
Initiatives
Course material
...

- **Feedback is welcome! Start a discussion!**
 - If you have information you would like to add to a specific page
 - If you notice information that is wrong, no longer up to date or incomplete
- Click on the discussion button at the top of the page

Section 20 – Methane Emission for Genetic Evaluation

 Page  **Discussion**

- Fill in a subject and description and add the topic
 - The writers of the pages and everyone else can comment on these topics
- Would like to add information, feel free to open a discussion on the main page

Current work

- Information on Interbull GENO forms for feed intake – feed efficiency and methane emission → update on wiki page
- Link [Global Methane Genetics](#) Initiative (Yvette de Haas: ADSA , June 25, 1:45pm)
 - Database for methane emission
 - Harmonisation/standardisation: protocols/SOP, trait definition, recording and analysis pipelines
 - Guidelines update/development (sheep, microbiome, ...)

Current work

- Brian Wickham Young Person Exchange Program
 - Feed intake SOP (Sarah-Joe Burn)
 - Tech comparison methane measurement devices (Fazel Almasi)
 - ExtraMIR Methane (Maria Frizzarin)
 - Methane emission in sheep (Michael Aldridge)

Thank you





Interbull Business Meeting

Item 15. ICAR Feed & Gas WG

Rasmus Bak Stephansen



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Item 16. ICAR Interbeef WG

Fernando Macedo



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Interbeef WG



Kim Matthews
Chair

Interbeef is a Working Group of ICAR

The objective is **developing and promoting national and international genetic and genomic evaluations of beef cattle.**



Standards



Sets guidelines for the identification, recording and genetic evaluation of beef cattle.

Combined data repository



Uses a shared platform (the Interbull Data Exchange Area) to ensure a fully automated validation process of each member's data.

Evaluation methods



Provides a support network for members that helps ensure the latest developments in genetic evaluation methods are used.

Validation and traits



Offers a pilot and test run service to incorporate new members, breeds and traits.

Multi-country comparisons



Provides country specific unbiased results (twice per year), to help enhance national and international beef breeding programs.

Sharing knowledge



Provides members with a vibrant, interactive forum for the sharing of knowledge ideas. This includes at least two meetings per year.



Interbeef International Evaluations

ICAR has contracted the **Interbull Centre** for the provision of **independent** and **unbiased** international beef **genetic evaluations**.

Evaluations:

- **Two** routine evaluations per year **since 2015**.
- **One** test evaluation per year.
- Input: **raw phenotypes**
- **Each country** as a trait with its **own model**

Five breeds:

Aberdeen Angus, Charolaise, Hereford, Limousine, Simmental

Three trait groups:

- Weaning weight
- Calving
- Carcass

Service fee based on participation:

- Breeds
- Trait groups





Interbeef Strategic Roadmap



March 2025

**INTERBEEF
STRATEGIC
ROADMAP**



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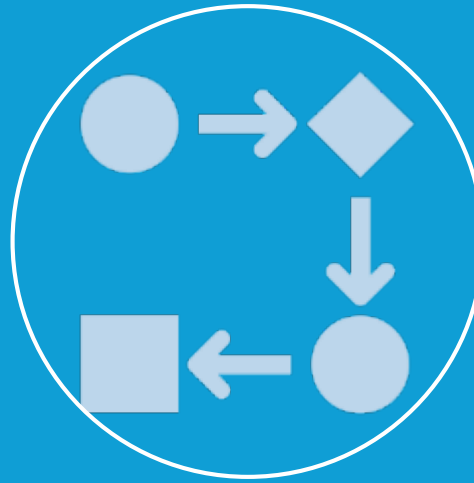
5 Strategic Goals



ENHANCING
EXISTING
SERVICES



EXPANDING NEW
SERVICES



IMPROVING
DATA SHARING



STRENGTHENING
NETWORKING



REFINING
GOVERNANCE



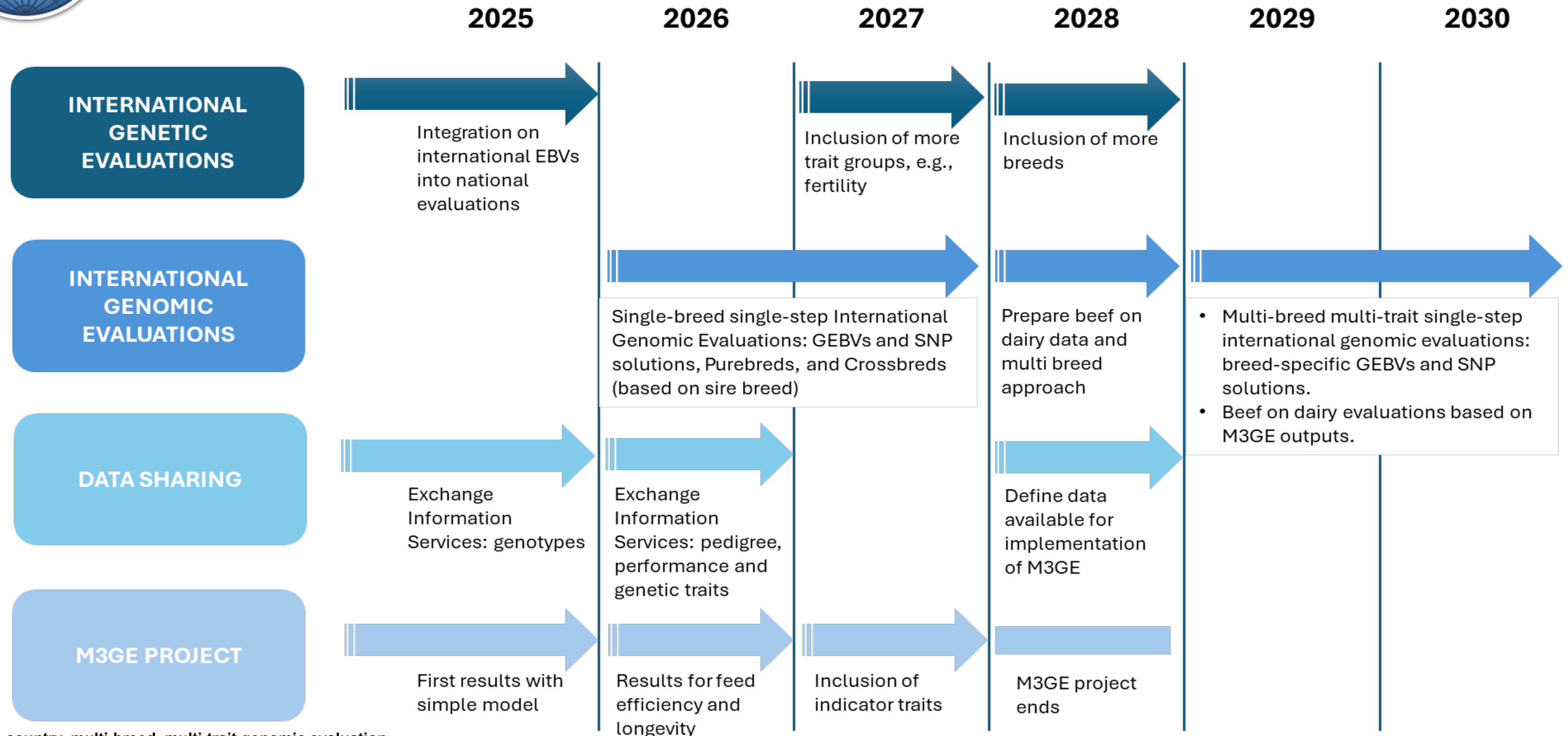


5 Strategic Goals

ENHANCING EXISTING SERVICES	EXPANDING NEW SERVICES	DATA SHARING	NETWORKING	GOVERNANCE
Enable the integration of international estimated breeding values (EBVs) into national evaluations.	Stepwise transition to single-step, multi-breed and multi-trait international genomic evaluations to enhance accuracy and relevance. Broaden the range of traits evaluated to better reflect users' needs, including fertility, beef-on-dairy, and other traits.	Improve data-sharing frameworks to simplify access and ensure the utility of Interbeef results in national programs.	Strengthen networking opportunities, facilitating better knowledge exchange among member organisations.	Develop a more robust governance model with active user engagement, dedicated leadership, and transparent decision-making processes.



Interbeef Strategic Roadmap





Interbull Business Meeting

Item 16. ICAR Interbeef WG

Fernando Macedo



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Item 17: Other Matters and Open Discussion

Matt Shaffer



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Item 18: Future Events

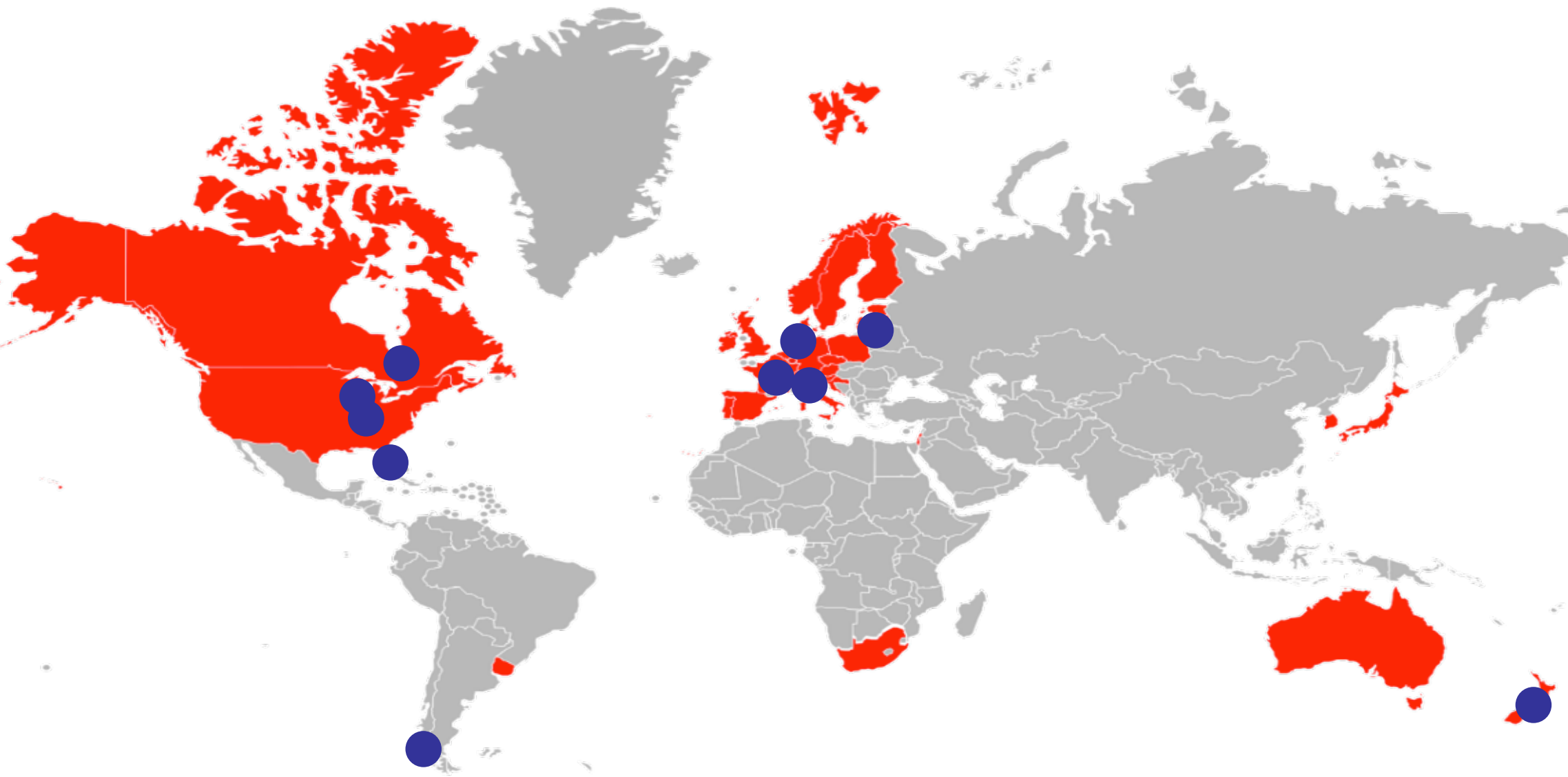
Matthew Shaffer



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Interbull Annual Meetings



ICAR:

2024 – Bled, Slovenia

2022 – Montreal, Canada

2021 – Leeuwarden, Netherlands

2020 – Leeuwarden, Netherlands

2018 – Auckland, New Zealand

2016 – Puerto Varas, Chile

EAAP:

2023 – Lyon, France

2019 – Davos, Switzerland

2017 – Tallin, Estonia

ADSA:

2025 – Louisville, USA

2019 – Cincinnati, USA

2015 – Orlando, USA



ICAR-Interbull Invitation to Verona - Italy



29 May - 5 June 2026

ICAR2026.IT





77 TH EAAP ANNUAL MEETING

European Federation of Animal Science

SAVE THE DATE

**7. - 11.
September
2026**



Venue:
Congress Centre Hamburg
(www.cch.de)

Germany





Interbull Business Meeting

Item 18: Future Events

Matthew Shaffer



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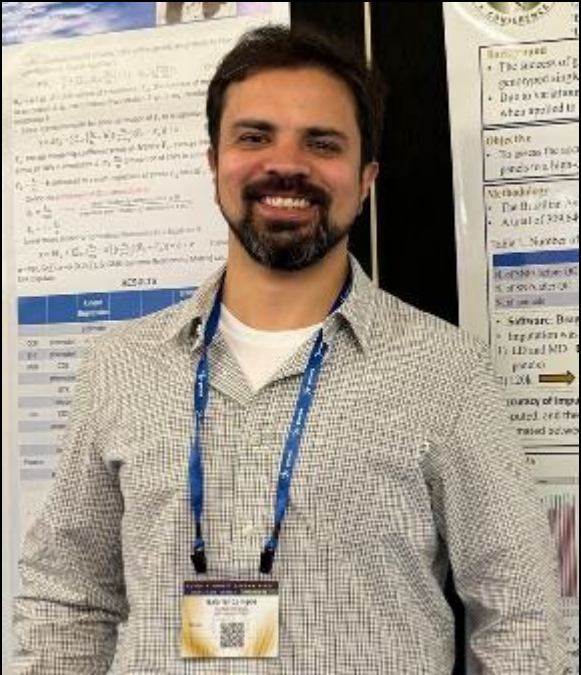


Interbull Business Meeting



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Interbull Business Meeting

Item 19: Close
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