NAV Nordisk Avlsværdi Vurdering
Nordic Cattle Genetic Evaluation

A EUROPEAN EVALUATION FOR THE JERSEY BREED

NAV, EBE AND THE CHOICES FOR EUROPEAN JERSEY ORGANIZATIONS

Haifa Splittorff, NAV

European Jersey Forum
16 November 2026, Switzerland

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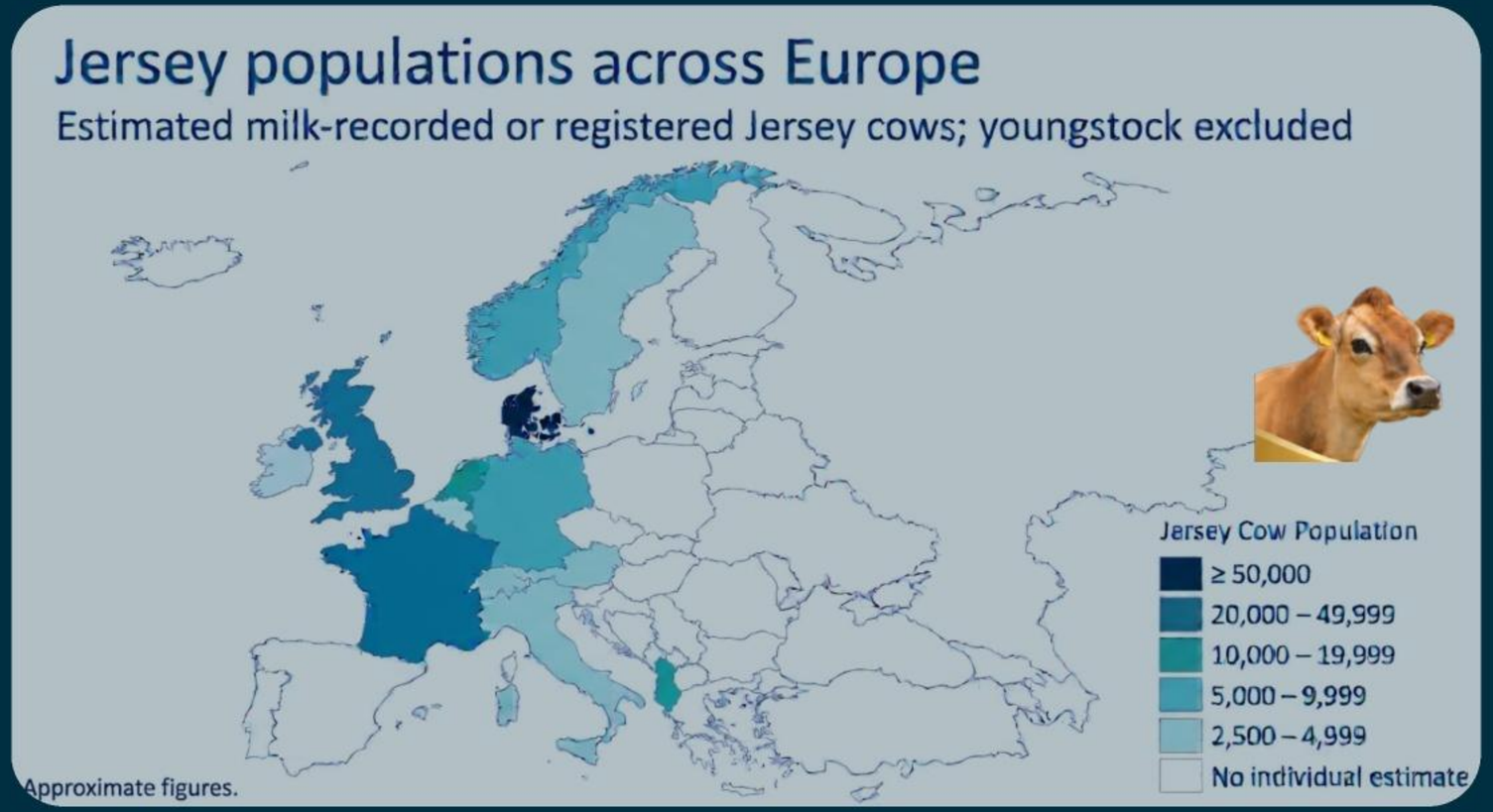
JERSEY IN EUROPE

~200,000
Jersey cows
in Europe



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NAV ALREADY CONNECTS A LARGE PART OF EUROPEAN JERSEY

>50%

of estimated European Jersey cows are in countries already cooperating with NAV

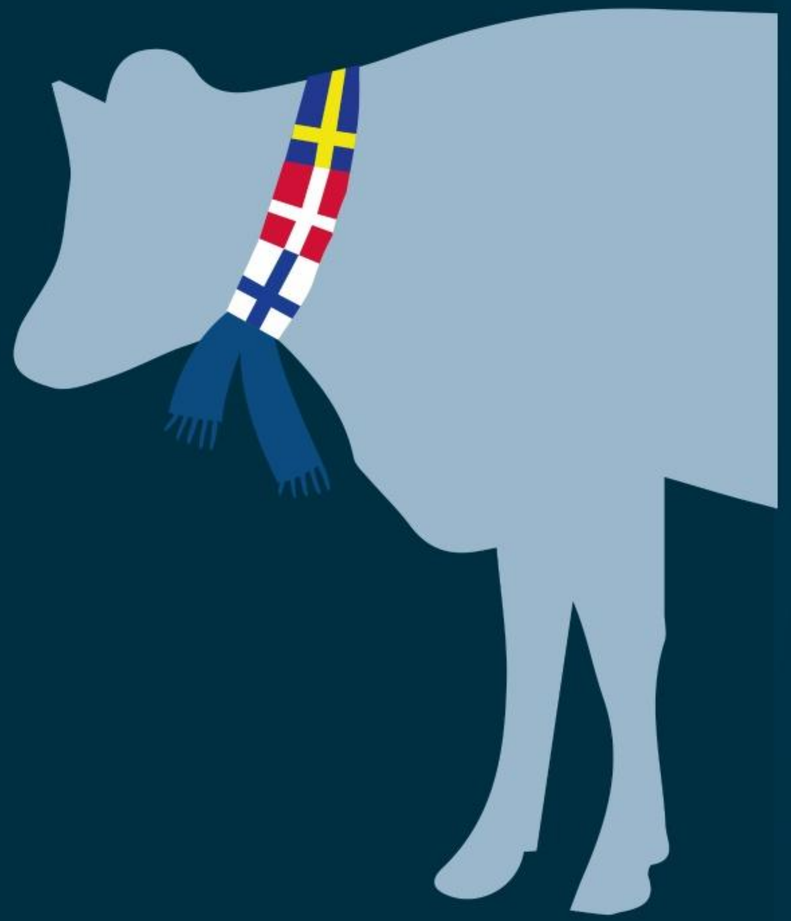


NAV: NORDIC ROOTS, INTERNATIONAL COOPERATION

NAV Nordisk Avlsværdi Vurdering
Nordic Cattle Genetic Evaluation

A network organization
Established in 2002

Landbrug og Fødevarer, Denmark
Växa, Sweden
Faba, Finland



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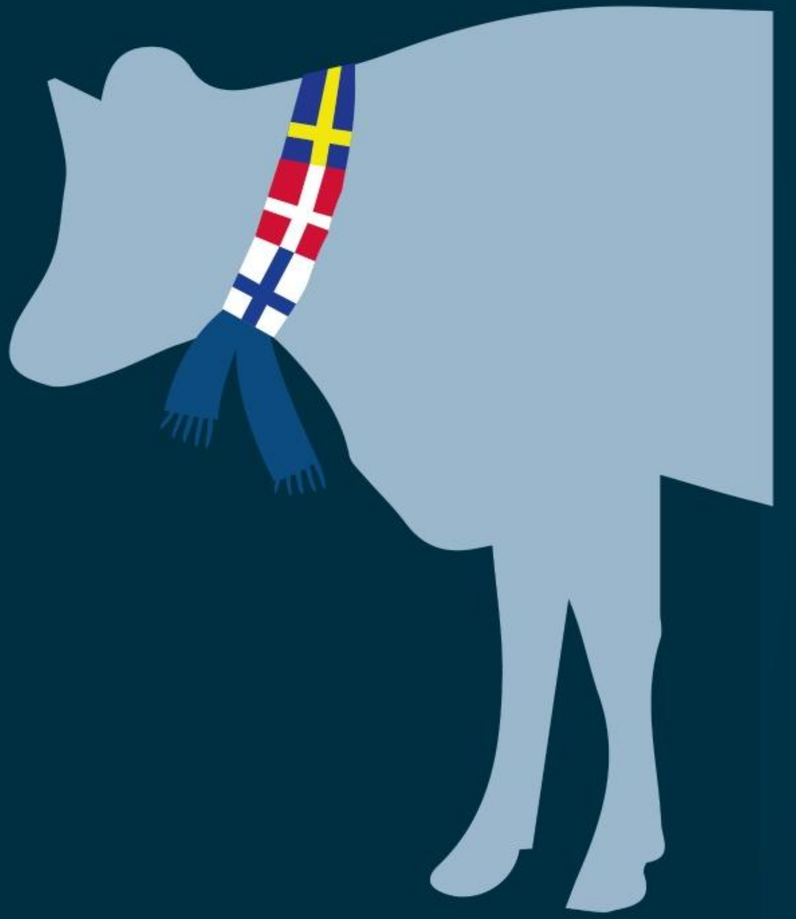
NAV – A PIONEER IN CATTLE GENETIC COLLABORATION

More efficient use of:

- Data
- Resources
- Expertise



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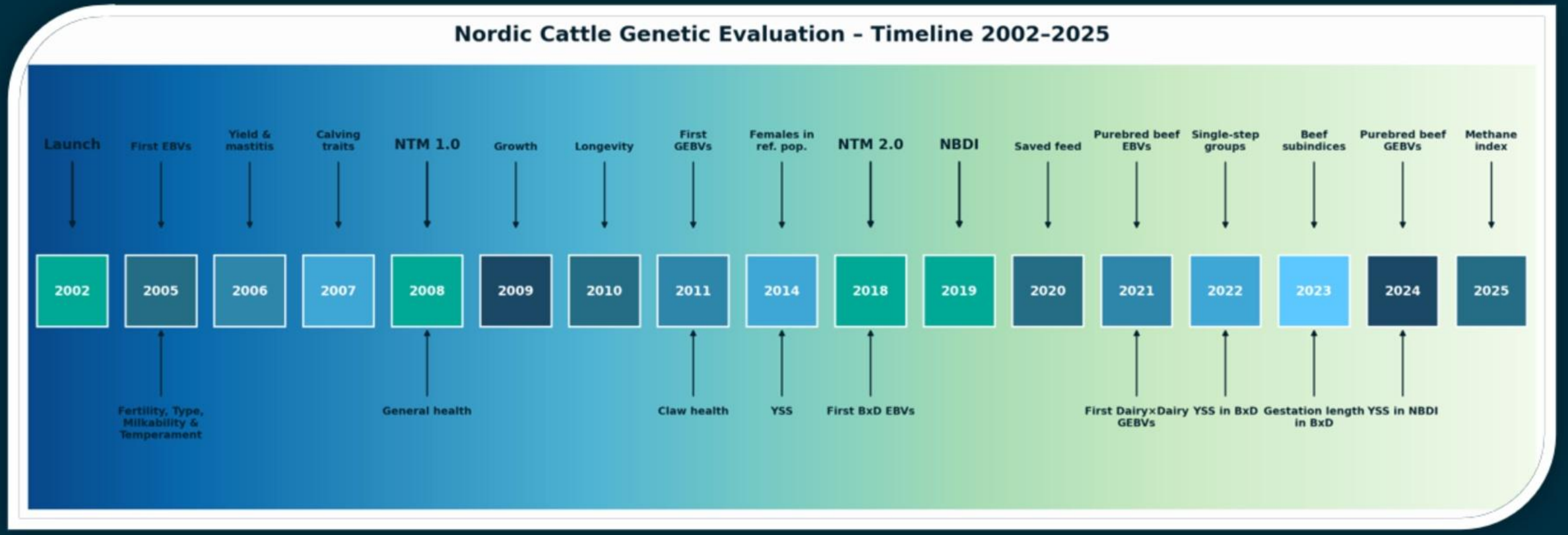
NAV – OVER TWO DECADES OF GENETIC EVALUATION DEVELOPMENT



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NAV'S DAIRY GENETIC EVALUATIONS

A BROAD PORTFOLIO — FROM PRODUCTION AND FUNCTIONAL TRAITS TO EFFICIENCY AND EMISSIONS

PRODUCTION: Milk, fat and protein yield; Growth

REPRODUCTION: Female fertility; Birth and calving traits

HEALTH: Udder health; General health · Claw health

SURVIVAL: Longevity; Youngstock survival

CONFORMATION & FUNCTION: Udder · Feet and legs · Body; Milkability · Temperament

FEED EFFICIENCY & CLIMATE: Saved Feed; Methane emissions

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NTM — Nordic Total Merit

Combining more than 90 individual traits into a balanced breeding objective.

- Production
- Survival
- Health
- Conformation
- Fertility
- Feed efficiency

→ NTM

90+ Individual traits

15 Main subindexes*

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NTM for Jersey — What Do We Select For?

Economic weights reflect the breeding priorities of the Jersey population.



NTM component	NTM weight factor
Yield	0.83 / 0.75*
Udder health	0.44
Saved Feed	0.38
Fertility	0.26
Udder conformation	0.15
General health	0.14
Youngstock survival	0.10
Longevity	0.09
Claw health	0.09
Milkability	0.09
Feet and legs	0.07
Birth and calving	0.04 / 0.07
Temperament	0.03

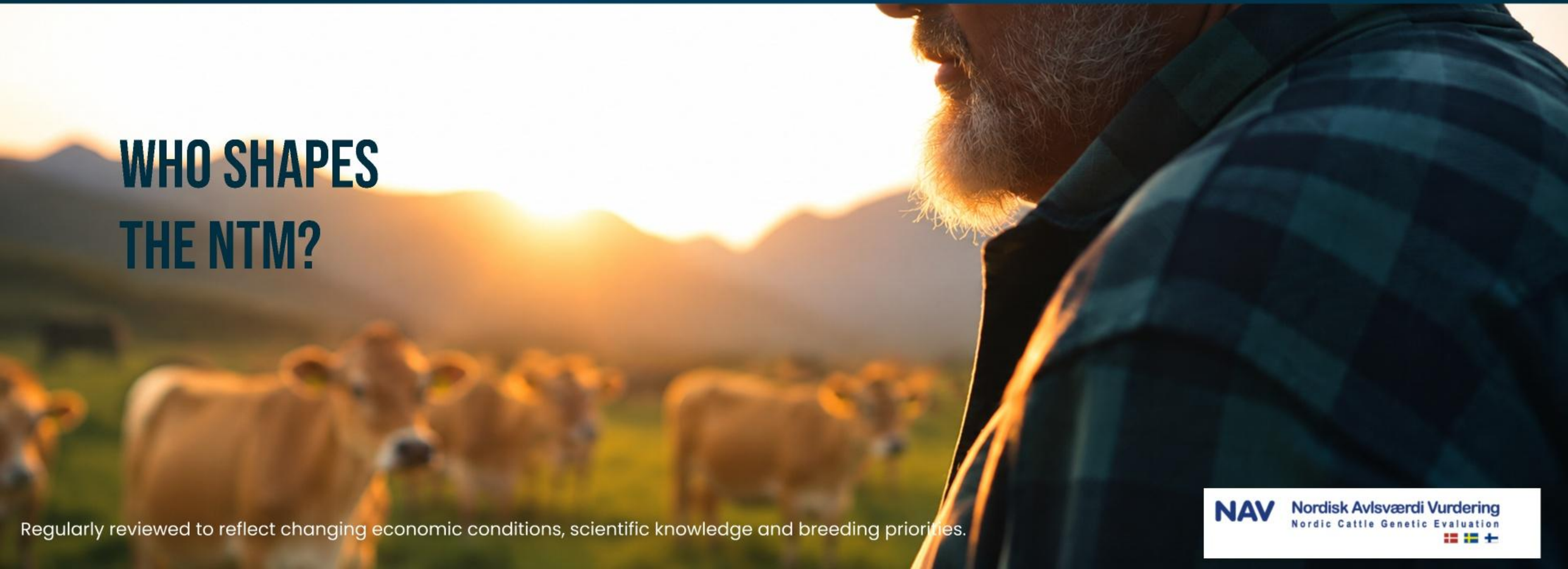
**0.75 applies to cows with their own yield record but without genomic information.*

Source: NAV NTM weight factors, May 2026.

BREEDING PRIORITIES

ECONOMIC VALUES

SCIENTIFIC EXPERTISE



WHO SHAPES THE NTM?

Regularly reviewed to reflect changing economic conditions, scientific knowledge and breeding priorities.

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EBE

FROM NORDIC COOPERATION TO EUROPEAN COOPERATION

EBE – European Bovine Evaluation

Established
18 July 2025

Purpose
Develop and run joint single-step evaluations for all partners

ELIANCE
VÄXA
faba
vit

- More data
- Shared expertise
- Efficient use of resources
- Stronger genetic evaluations

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NAV AND EBE – HOW THEY WORK TOGETHER

EBE : Takes over the calculation of breeding values (EBVs) for selected traits and breeds.

NAV: Continues to fulfill its essential responsibilities and mission.



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NAV RESPONSIBILITIES IN THE EBE ERA

NAV EBE

Data collection and integration

NAV continues to coordinate and prepare national data.

Genetic evaluations

EBE takes over selected evaluations; NAV continues other traits and breeds.

Combined indexes and NTM

NAV retains responsibility for NTM and combined indexes.

Research and development

NAV continues R&D, collaborating with EBE.

Publication and communication

NAV continues publishing and communicating breeding values.



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What Changes for Existing NAV Partners?



THE MAIN CHANGE HAPPENS BEHIND THE SCENES

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EUROPEAN JERSEY – GROWING POPULATIONS, DIFFERENT EVALUATION SETUPS



ESTABLISHED NATIONAL EVALUATIONS

EVALUATIONS VIA NAV

NO EVALUATIONS

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EUROPEAN JERSEY – UNEVEN TRAIT COVERAGE, SHARED OPPORTUNITIES

CORE TRAITS — WIDELY EVALUATED

Production • Fertility • Conformation

FUNCTIONAL TRAITS — VARYING COVERAGE

Udder health • Calving • Longevity • Milking speed

NEW & SPECIALIZED TRAITS — SELECTIVE COVERAGE

Feed efficiency • Methane • Hoof & general health • Youngstock survival

Illustrative grouping based on reported survey results.

THE OPPORTUNITY

- Build on a strong shared baseline
- Gain access to genetic evaluations
- Scale up complex & new traits
- Pool data for larger reference populations



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EUROPEAN JERSEY EVALUATION

SCENARIO A



DIRECT EBE MEMBERSHIP

- Join the shared EBE evaluation engine directly
- Organize national delivery, indexes and services locally

SCENARIO B



COOPERATION VIA NAV

- Submit data through NAV as an established partner
- Access breeding values, indexes and support through NAV

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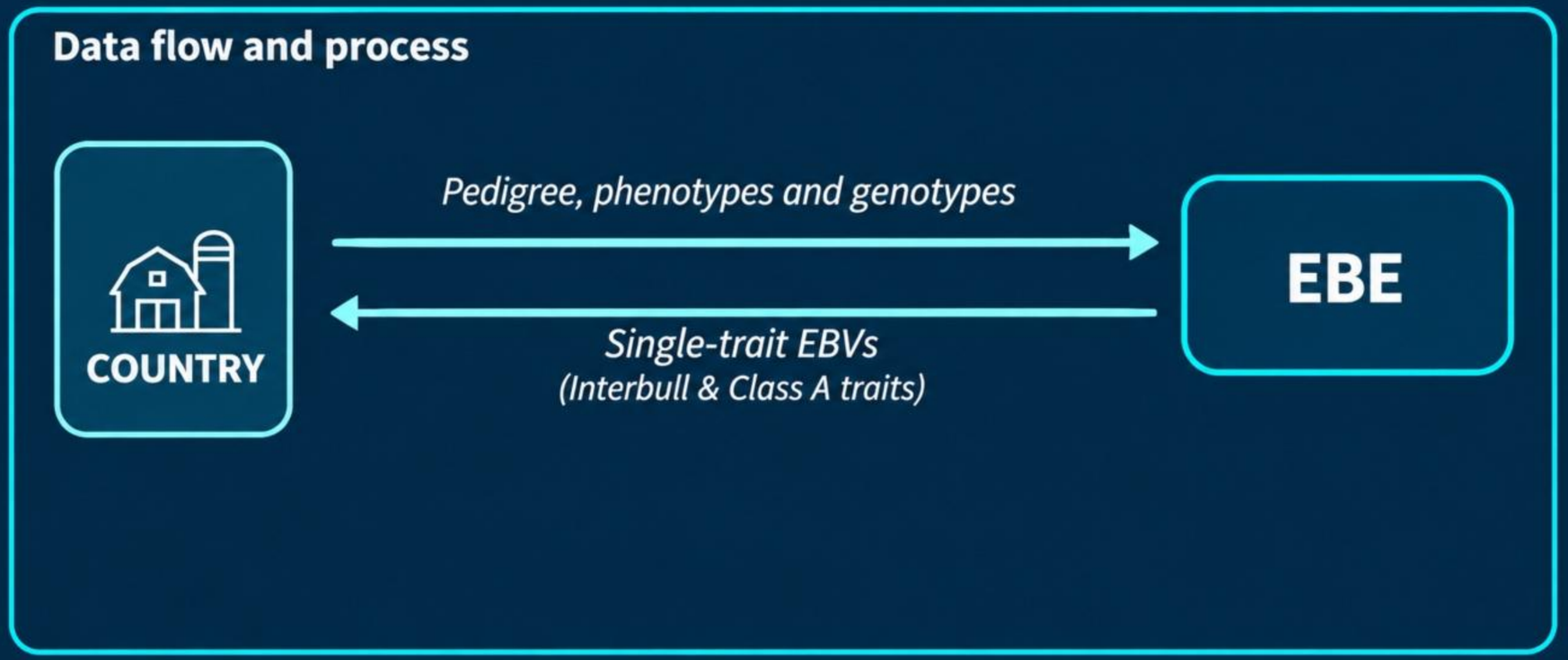
EUROPEAN JERSEY EVALUATION

SCENARIO A: DIRECT EBE MEMBERSHIP



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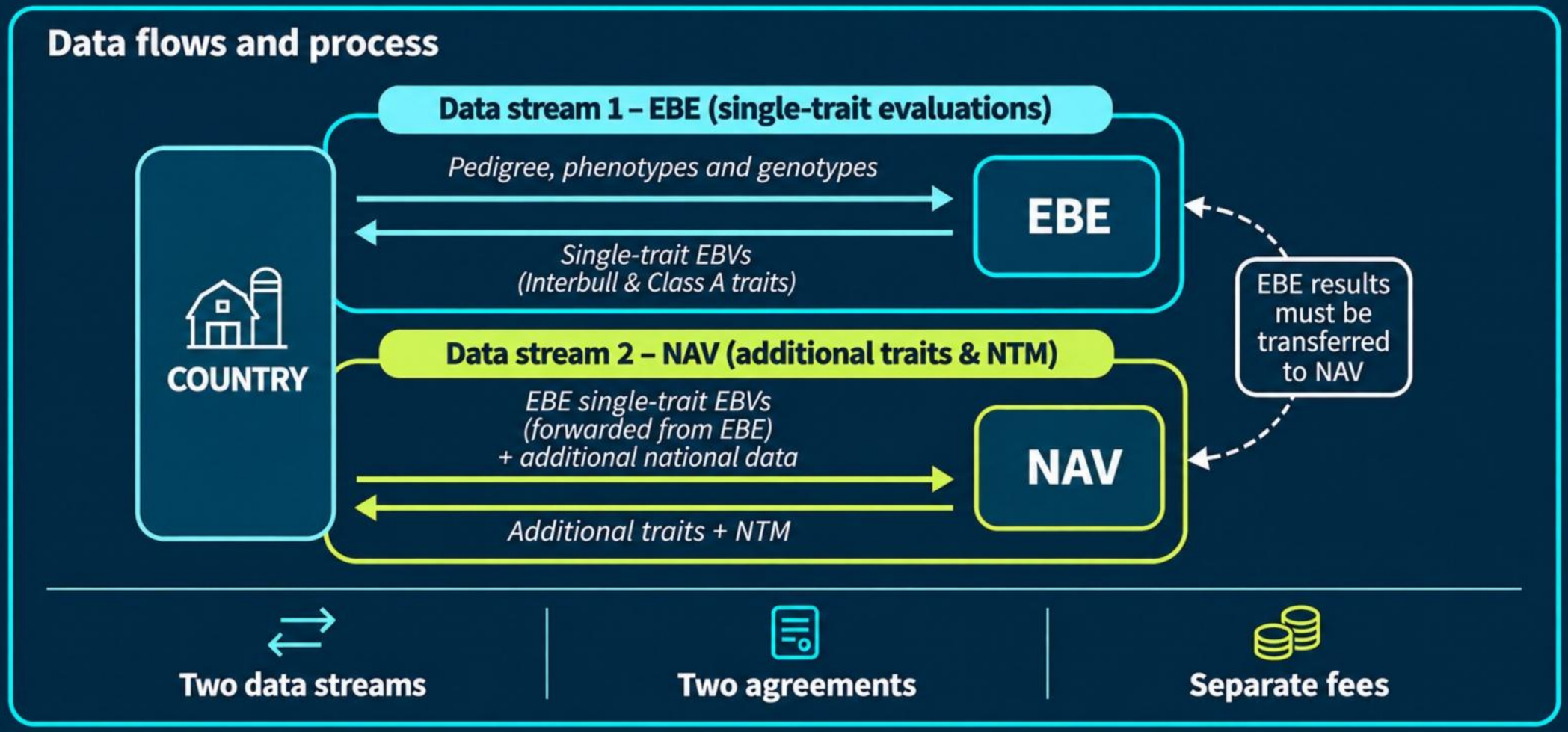
EUROPEAN JERSEY EVALUATION

SCENARIO A: DIRECT EBE MEMBERSHIP

(+ NAV SERVICES FOR ADDITIONAL TRAITS AND NTM)



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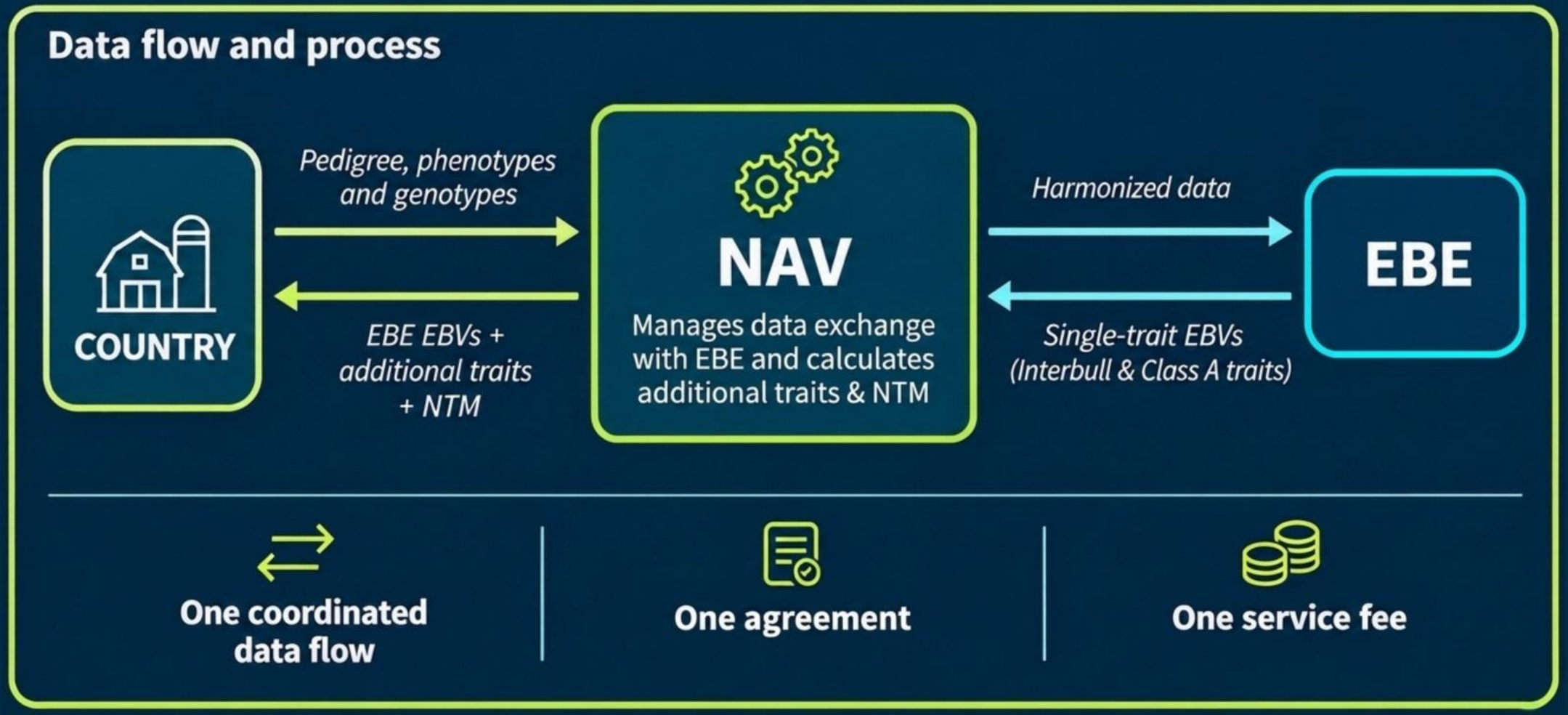
EUROPEAN JERSEY EVALUATION

SCENARIO B: COOPERATION VIA NAV



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WHAT DOES IT TAKE TO JOIN A JOINT EVALUATION?

01



DATA AVAILABILITY

Relevant phenotypes, pedigree and genotypes

02



DATA QUALITY

Validation, cleaning and harmonization

03



INTEGRATION

Adapt data and evaluation models

04



CONNECTEDNESS

Assess genetic links between populations

05



VALIDATION

Test reliability and expected benefits

Participation is assessed separately for each trait group.

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EUROPEAN JERSEY — THE OPPORTUNITY AHEAD

Collaboration is essential — especially for smaller populations.

Combining data creates opportunities for more reliable evaluations and broader genetic progress.

The potential for European Jersey cooperation is substantial.

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Nordic Cattle Genetic Evaluation



Thank you!