

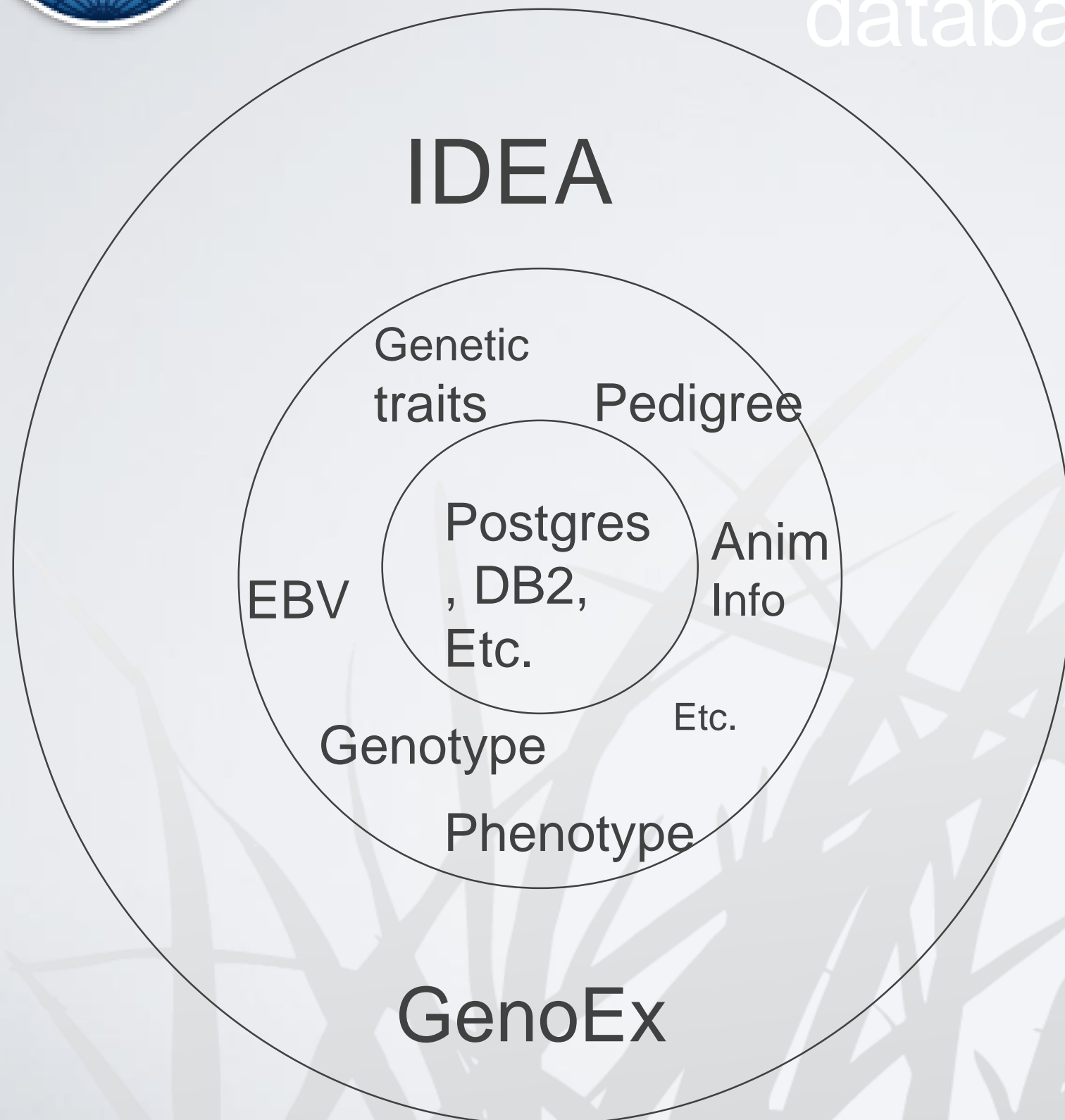


Genotype Exchange



Overview of Interbull Centre

databases



IDEA:

- Interbull Data Exchange Area
- Access point for **Genetic Evaluations**
- Interbull
- Interbeef

GenoEx:

- International Genotype Exchange Platform
- Access point for **Genotype Storage and Exchange**
- Interbull
- Interbeef
- **Wider ICAR Community**



Need for flexibility and scalability

- Integration:
 - GenoEx-PSE no need for pedigree information
 - GenoEx-GDE needs connection to IDEEA pedigree
 - Future services might need integration with other systems
- Permissions in PSE are simple
- More complex permission might be needed for future services
- PSE needs to handle multiple and duplicate records for each animal

- The system needs to handle genotypes for
 - Many animals
 - High density SNP Arrays
- Some use cases " require working with a large fraction of the data in the system
 - e.g. "Get the best SNP data for animals of certain breed"

Flexibility

Scalability



Creating flexibility and scalability

- To accommodate our needs, GenoEx is designed to:
 - Store SNP data on several database nodes (servers)
 - Handle lots of concurrent input/output
 - Interoperate with BC|SNPmax for use of its unique features
- And allows for:
 - Custom user interface
 - Faster/cheaper changes
 - Full control of integrations



GenoEx-PSE: Permissions

- Permissions are per SNP Group
 - Verification
 - Discovery
 - MS Imputation
- Each organization will have permission to submit and extract everything in the groups they belong to
- "*Policing*" fairness of submission/extraction ratio is done semi-automatically by ITBC
- More complex rules will be possible e.g. Limiting submission/extraction to certain breeds, SNP groups and source countries