



GEN EX

International Genotype Exchange Platform

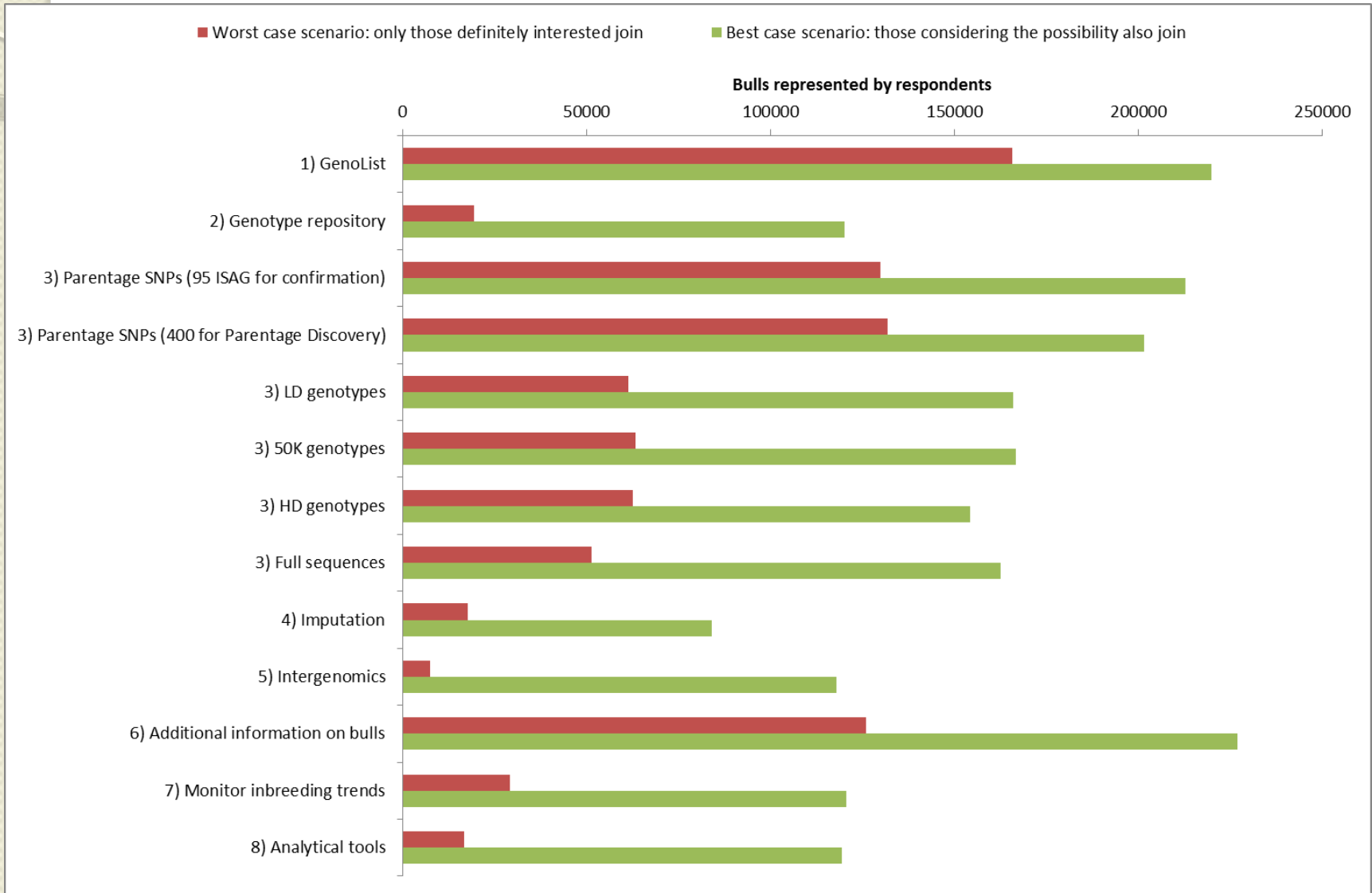


Steps so far

- SNP data has become an integral part of genetic evaluation of cattle
- Concerns to share this data have decreased
 - Although in many (AI) / herdbook organisations this is not yet the case
- Interbull conducted in 2012 a survey among their customers to assess the demand
 - Sent to the customers → they should share this document with other organisations involved in this field (ie for parentage with breed federations)



Genoex – potential demand from survey





Actions in 2013

- Little time for discussion in the IB SC because of GMACE implementation
- Technical proposal developed by Interbull centre
 - Sent to group of experts
- Active participation in ICAR parentage WG
- Discussion with NAC (Indianapolis July 2013) showed an option to establish a different approach (not a single location with all data rather a connection between (the servers of the) parentage verification service providers)
- Presentation to the ICAR board (November 2013)



Actions in 2014

- Interbull proposed a joint session with ICAR on use of SNP data in parentage issues → Session Tuesday May 20, 2014
- Interbull SC decided to separate implementation into two levels
 - Complete genotype repository (eg demand from BS federations, Interbeef)
 - Infrastructure to enable parentage SNP data exchange between breeding organisations
- Business plan developed
- Presentation of a proposal at the ICAR meeting in Berlin



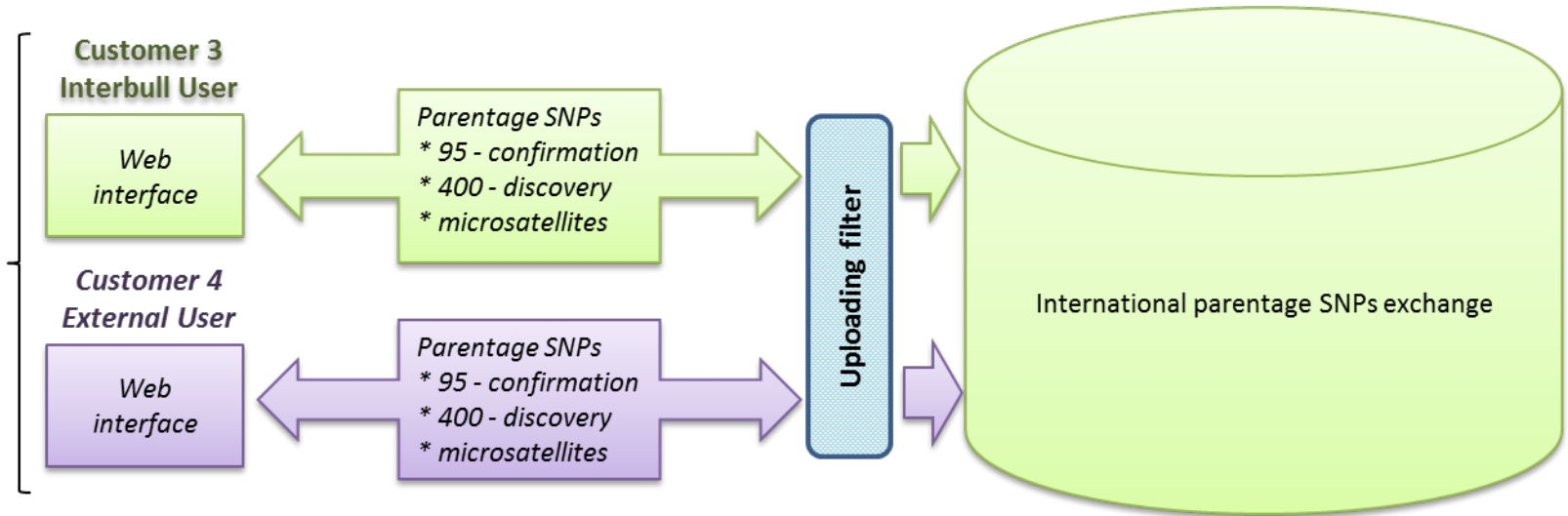
VALUE PROPOSITION

- Establish the **INFRASTRUCTURE** necessary for international cooperation based on **SNP** data
- Optimize customer investments in genotyping by **AVOIDING DUPLICATION**
- Establish **STANDARD PROTOCOLS FOR GENOMIC DATA EXCHANGE**
- Become the international source of **BOVINE PARENTAGE SNPS**
- Facilitate **MULTILATERAL SNP DATA EXCHANGE** by establishing a common repository and customer driven access rules
- (Provide affordable **GENOMIC DATA STORAGE** for small populations)



Parentage SNP exchange service

Parentage
SNP
exchange
service





Genoex – budget - parentage

Initial investment (€)	Year 1	Year 2
Software (initial licensing)	30,000	0
Data collection functionality (BC Platforms)	5,000	0
DB server	5,000	0
Operational costs (€)		
Software (maintenance fee)		
Internet bandwidth and traffic	0	
Programmer/DB Admin (50%)	15,000	15,000
Scientist (20%)		0
Overheads (33% of salaries)	4,950	4,950
Income source (€)		
Infrastructure grants	40,000	0
Service fees	19,950	19,950
Total income:	59,950	19,950



Infrastructure grants

- Potential sources:
 - ICAR
 - SLU
 - Swedish funds

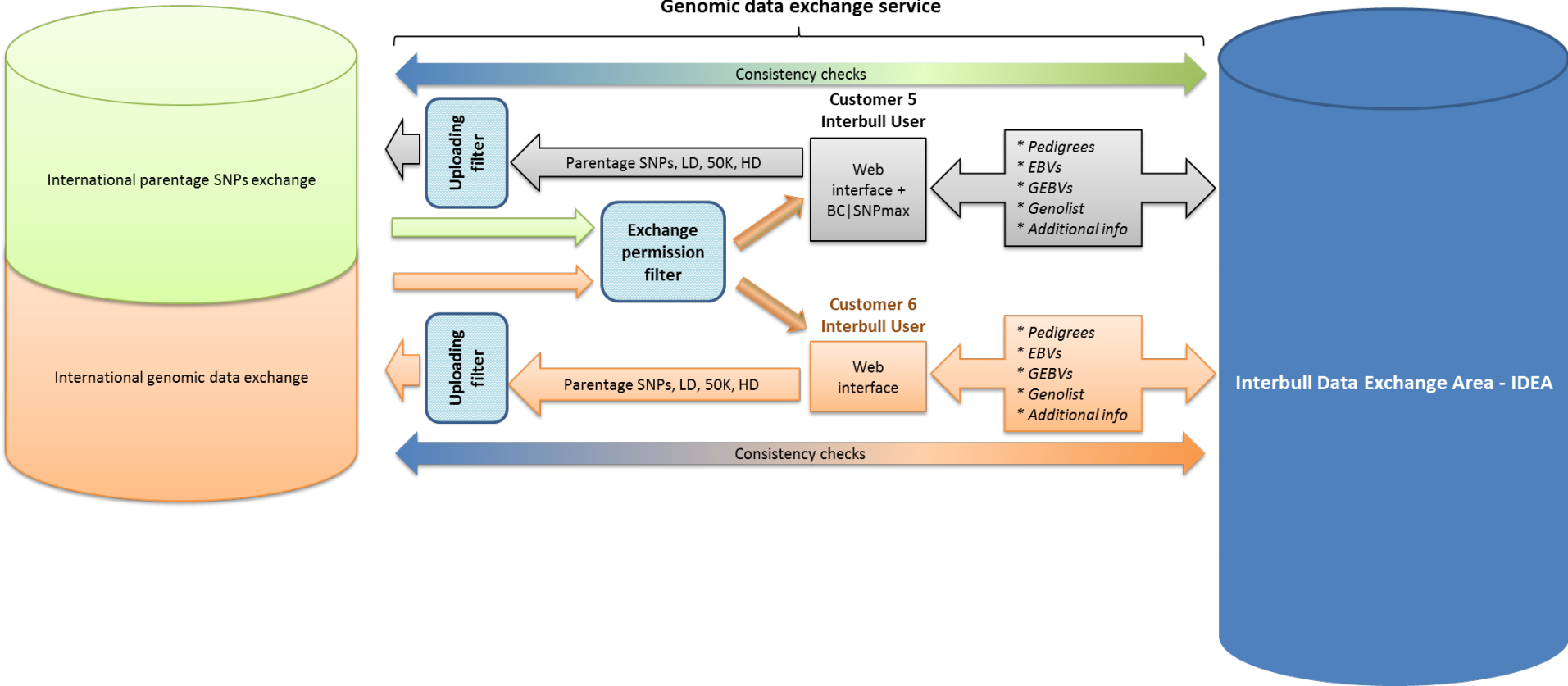


Service fees

- Parentage SNP exchange service
 - Participation fee I, irrespective of usage rate



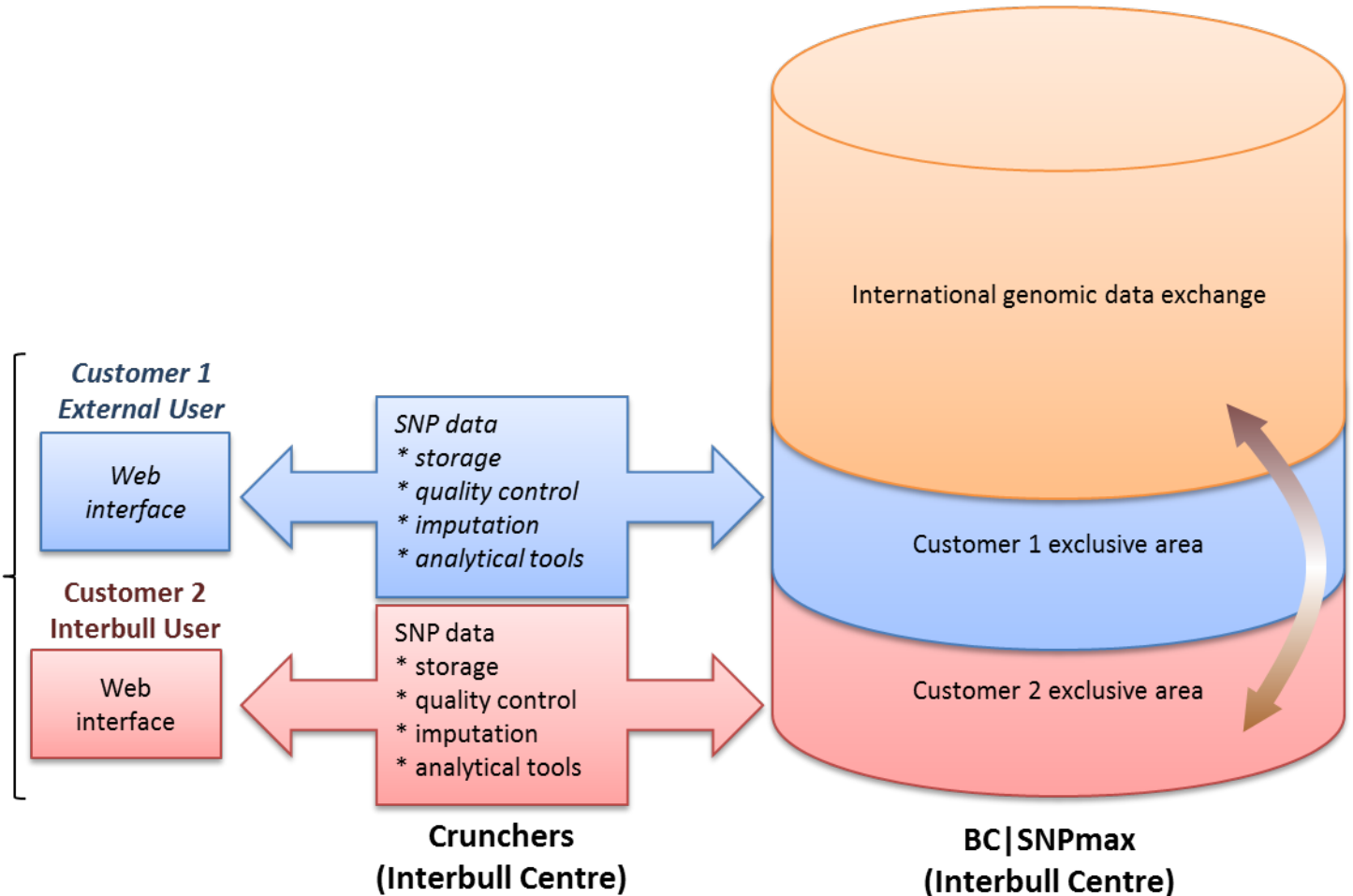
Genomic data exchange service



Customized genomic repository service

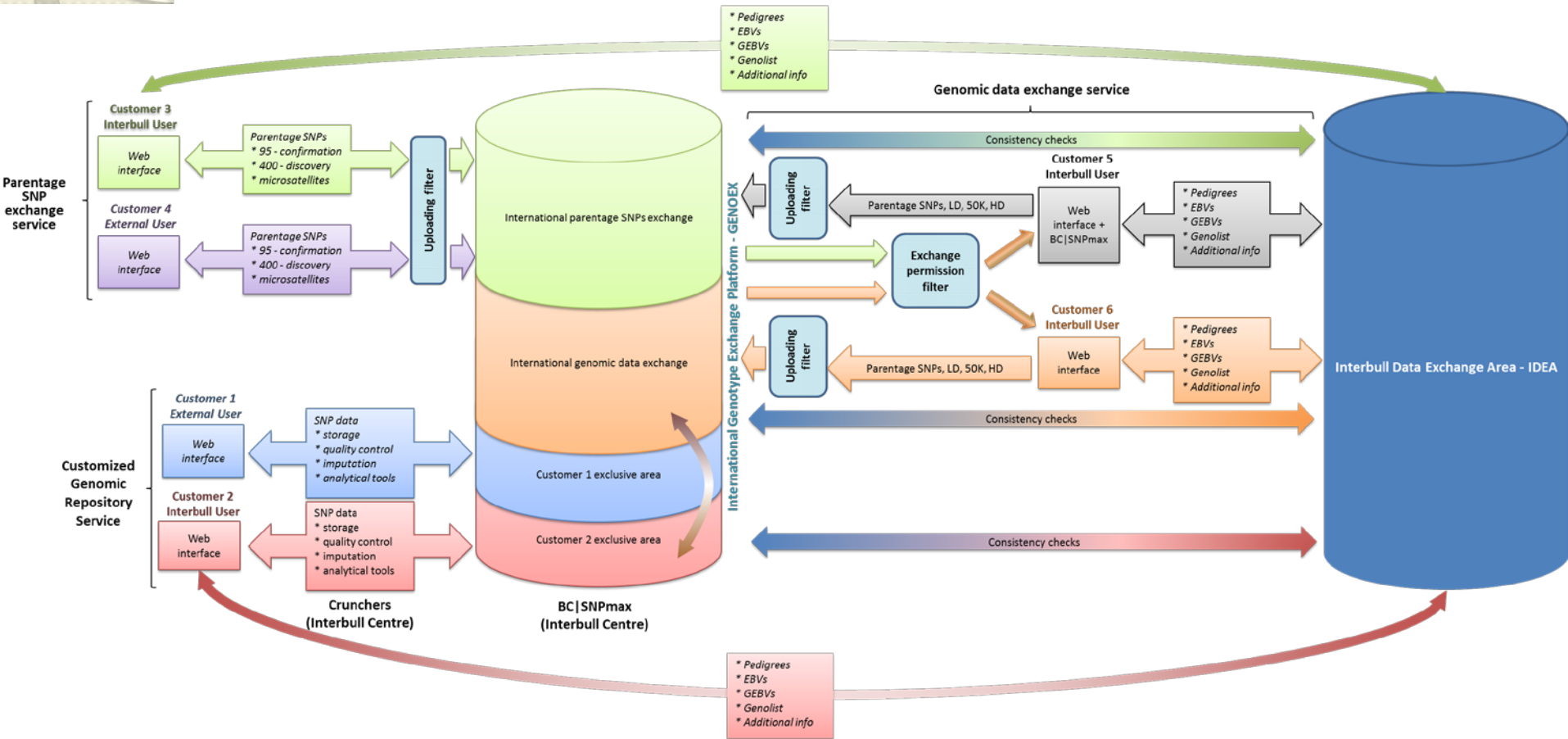


Customized Genomic Repository Service





Genoex – service categories





Genoex – service categories

