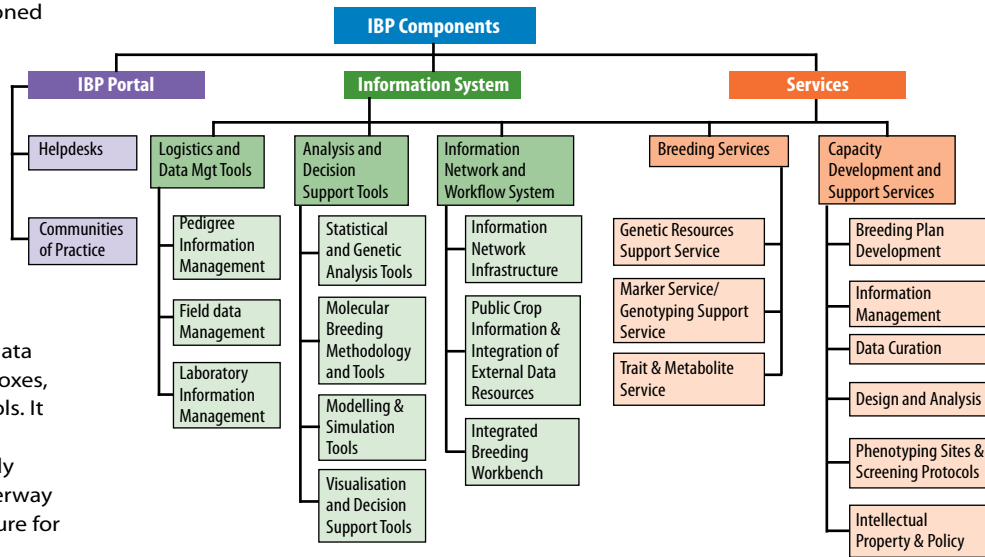


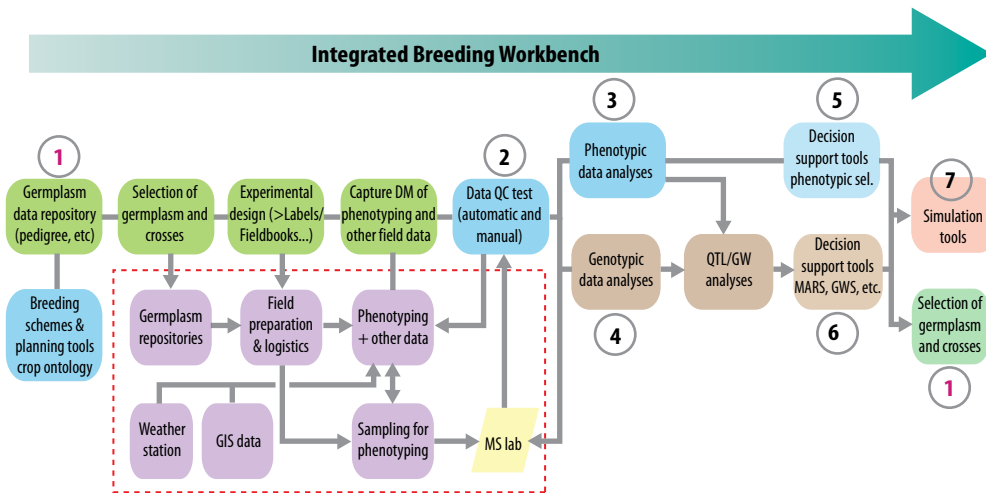


Launched in mid 2009, the Integrated Breeding Platform (IBP) is envisioned as a sustainable, web-based, one-stop shop for information, analytical tools and services to design and carry out integrated breeding.

- **Portal:** Scheduled for inauguration by the end of 2010, the portal will be the online gateway to tools and instructions, breeding materials and laboratory services. Helpdesks will facilitate both portal use and access to tools and services via offline media.
- **Information System** and adaptable breeding workflow system: The centrepiece of the IBP will be the Integrated Breeding Workbench – an integrated software system for managing breeding logistics, data, simulation, analyses, and decision-making through a user-friendly graphical user interface. It will comprise of interconnected data capture and quality assurance tools, comprehensive analytical toolboxes, state-of-the-art simulation tools, and advanced decision support tools. It will be customisable for different crops and breeding strategies.
- **Services:** Brokerage of molecular marker laboratory services is already firmly established and capacity development activities are well underway – incorporating both intensive training and support with infrastructure for selected fieldsites.



### Integrated Breeding Workbench



The Platform will promote and facilitate sharing of information, overcoming the traditional reluctance of researchers to share data. The Integrated Breeding Workbench will ensure common or compatible data collection and management practices.

A valuable by-product of using this common system will be the accumulation of well-documented, readily accessible, high-quality breeding information.

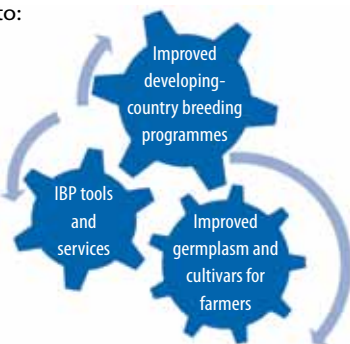
This information will be integrated and published by the Crop Lead Centres of the Consultative Group on International Agricultural Research (CGIAR) as part of a public network of crop breeding information.

The CGIAR Generation Challenge Programme (GCP) is building the Platform in collaboration with 14 initial 'user cases' – breeding projects for eight crops in 16 developing countries in Africa and Asia, to ensure that IBP development is driven by real breeder needs. The project is funded by the Bill & Melinda Gates Foundation, the United Kingdom's Department for International Development, and the European Commission.

The Platform will open up to additional experimental users from 2012, with full unfettered access scheduled for 2014. Beyond 2014, it is proposed to be a sustainable service, supported in part by annual fees paid by members of a formal user community.

IBP will advance modern breeding capacity by linking CGIAR Centres and advanced research institutes with developing-country breeding programmes and research organisations. It will stimulate the development of Communities of Practice to:

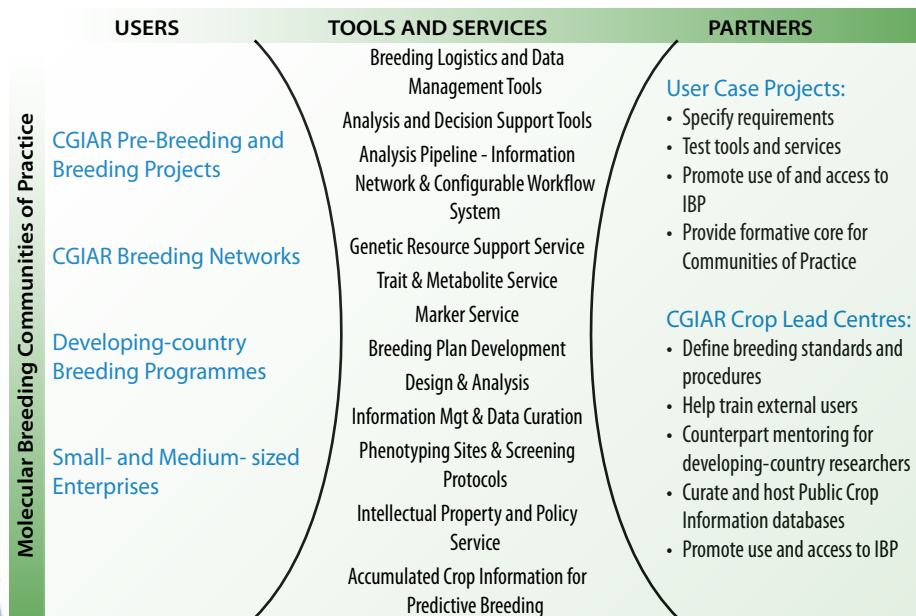
- Promote application of molecular breeding techniques
- Encourage utilisation of facilitative information management technologies
- Enhance data and germplasm sharing
- Facilitate and accelerate a paradigm shift to a more collaborative, outward-looking, technology-enhanced approach to breeding.



### Challenges

- Developing tools that meet user needs – hence ensuring the entire venture is demand-driven rather than technology-push, achieved by sustaining conversations between platform users and platform developers, and engaging with leading practitioners and institutes.
- Long-term sustainability, being addressed by negotiating a long-term position for the Platform as a cross-cutting service in the future CGIAR, with allied concepts of a membership supported by dues.
- Conservative inward-looking research approaches that limit collaborative work, being addressed through Communities of Practice and online forums.
- Reluctance among researchers to share data, being addressed by ongoing confidence-building measures, and a management regime that will give distinct privileges to users willing to share their data.

### The IBP Partnership



### Conclusion

Molecular breeding will have a significant impact on crop breeding in developing countries because of:

- the needs-driven demand for improved crop varieties to counter the global food crisis;
- the increasing public-private partnerships;
- the exponential development of genomic resources;
- the ever-declining cost of marker technologies; and
- the emergence of platforms for accessing molecular breeding tools and support services.

IBP will hasten achievement of this by providing developing-country breeders with convenient and cost-effective access to genomic resources, advanced laboratory services, and robust analytical and data management tools.