

Shared Services

Funders request to centers

5. Participate in the design and implementation of shared breeding support services system-wide, in anticipation of One CGIAR, that will prevent duplication and provide CGIAR breeding programs with greater bargaining power in purchasing or contracting equipment, genotypic services, and software.
 - E.g. the High-Throughput Genotyping Project managed by the EiB, which has successfully negotiated and implemented genotyping service contracts for the whole system (and NARS partners) that have greatly reduced the cost of diagnostic SNP genotyping for CGIAR and NARS breeding programs, allowing routine use of markers in forward breeding.
 - Similar initiatives needed for occupational health and safety, phenotyping processes, seed storage, information management.

Key messages from 2019 annual meeting

“... Thinking on the future state, bottlenecks, we have to address redundancies...”

“.. Decentralized as much as is needed..”

“.. How to optimize in OneCG, optimizing staff and deployment, talent development...”

Priorities identified at 2019 annual meeting

Phenotyping

Genotyping

Biometrics

Product management



Shared services initiatives

CGIAR Shared Services

Centralized Operations



Phenotyping

Breeding Operation
Alliance of Excellence

Digital phenotyping –
service

Phenotyping for Quality and
nutritional traits - service



Breeding schemes

Scheme optimization
framework



Information Technology

EBS adoption

Biometric Support



Genotyping

Genotyping services

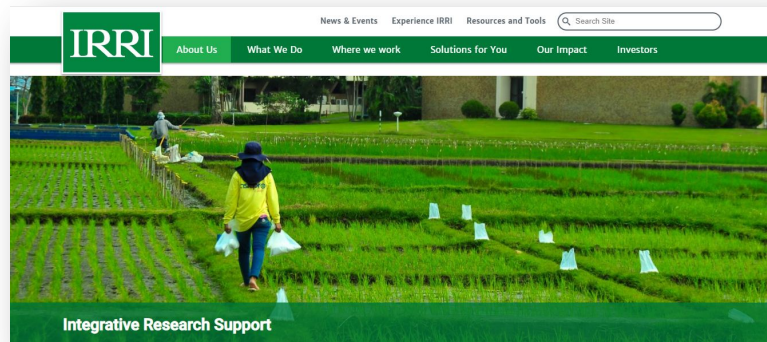


Excellence in
Breeding
Platform

Centralized Operations



CIOT -
ICRISAT



IRS -
IRRI

Centralized Operations

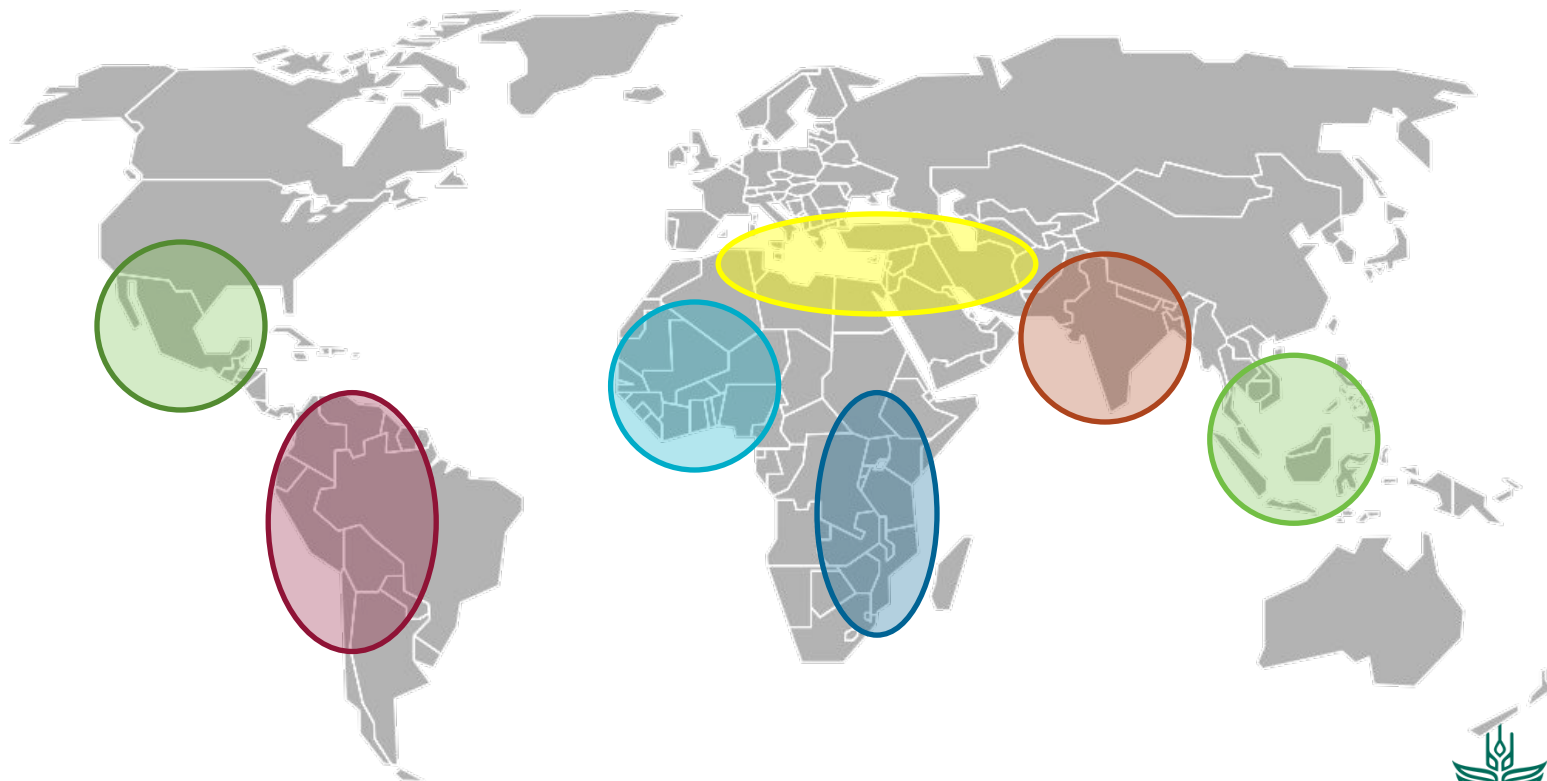
How can we create a cross center operation platform?

Centralized Operations



Trialling regional multi-crop
research hubs with CtEH
investment

Centralized Operations – Regional Hubs

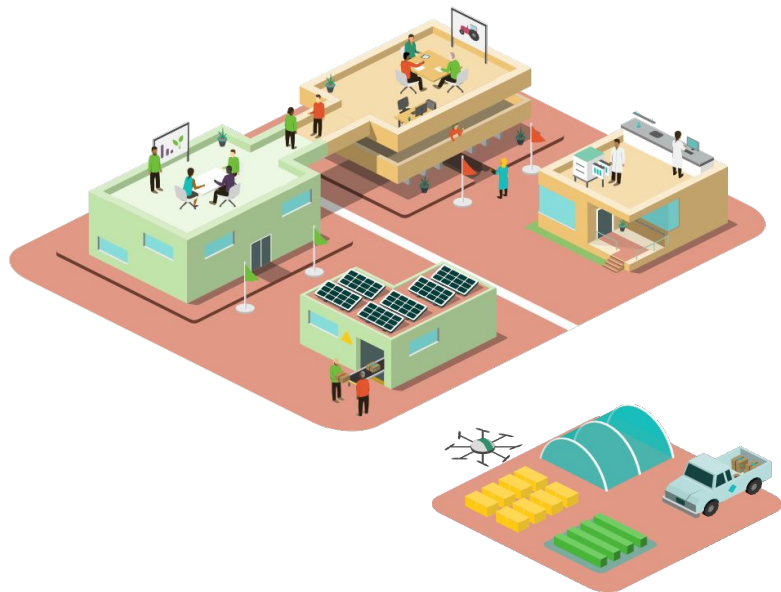


Centralized Operations – Regional Hubs



- Would provide services to different breeding programs
- Would require SOPs to deliver services that are not in their current portfolio
- Would need to agree to perform activities for other centers

Centralized Operations – Regional Hubs



Next steps:

CtEH funds to strengthen regional hubs

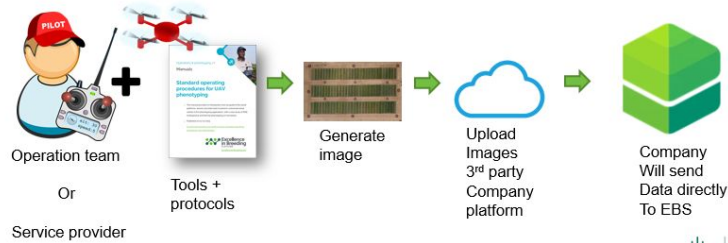
- IITA - Ibadan
- ICRISAT – Hyderabad
- ESA - TBD



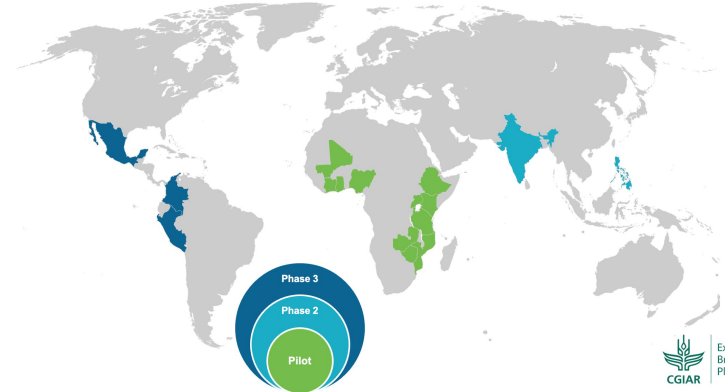
Phenotyping

HTPP – Agronomic traits / field phenotyping

- Our goal



Breeding operation alliance of excellence



Grain Quality / Nutritional traits





Genotyping

Genotyping Deployment and Support Network



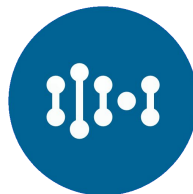
Centralized Deployment Strategy

1. Unified trait introgression (hubs)
2. Routine QA/QC
3. GS strategy (crop specific)



Operationalized Genotyping

1. Genotyping charge accounts
2. Reduced transaction costs
3. Data point allocation (future state)



Network Coordination & Support

1. CGIAR and NARs networks
2. Technical advisory and logistics
3. Capacity building & knowledge sharing



Breeding scheme optimization support

Breeding scheme optimization support and tools

Knowledge base

1. How-to manuals
2. CoP videos
3. Six sigma tools
3. Simulation reports
4. Breeding scheme examples

EiB
Toolbox



Knowledge transfer

1. Trainings
2. Visits
3. Topic discussion on request



GitLab



Software tools

1. Breeding scheme descriptor
2. Breeding scheme designer
3. AlphaSimR and QG code for BSO

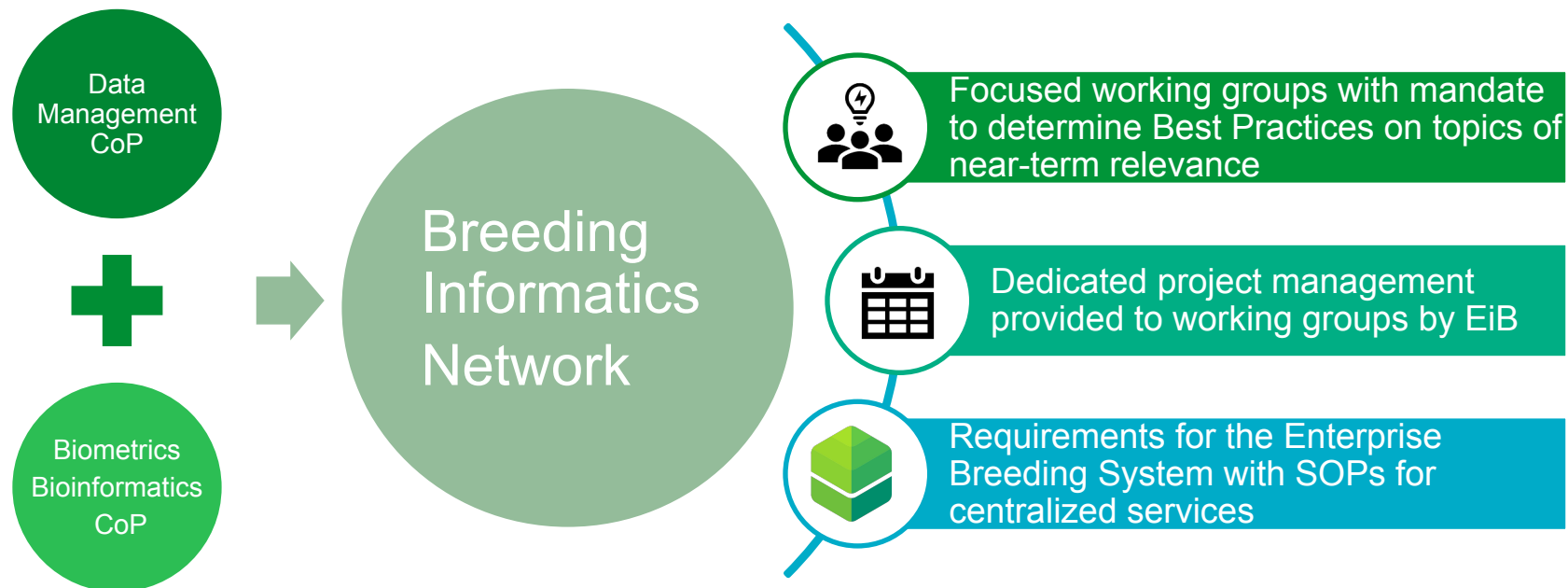


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Breeding
Platform



Data management and biometrics support

With the existing CoPs as a foundation, we will initiate a cross-Center Breeding Informatics Network in 2021



Biometric resources are Center-specific and unevenly distributed across the CGIAR

	CIMMYT	IRRI	IITA	ICRISAT	CIP	CIAT	ICARDA	AfricaRice
Biometrics			1 FTE		1 FTE			
Bioinformatics	Molecular breeding expertise, but no bioinformatician		1.5 FTE					

- Most centers are in need of additional analytical support to facilitate their continuous improvement plans
- Needs are being evaluated and positions will be funded to support gaps for high priority areas

Training and Adoption Network (TrAiN)



Enable CGIAR to support their own breeding programs and NARS

Focus on crop-cycle training – trainers available during key breeding activities

Training and Adoption Network (TrAiN)

Key activities

Harmonize
documentation for
EBS, BMS,
Breedbase and
digitization tools



Track adoption
with KPIs

Training for
Digitization:
Barcoding and data
collection

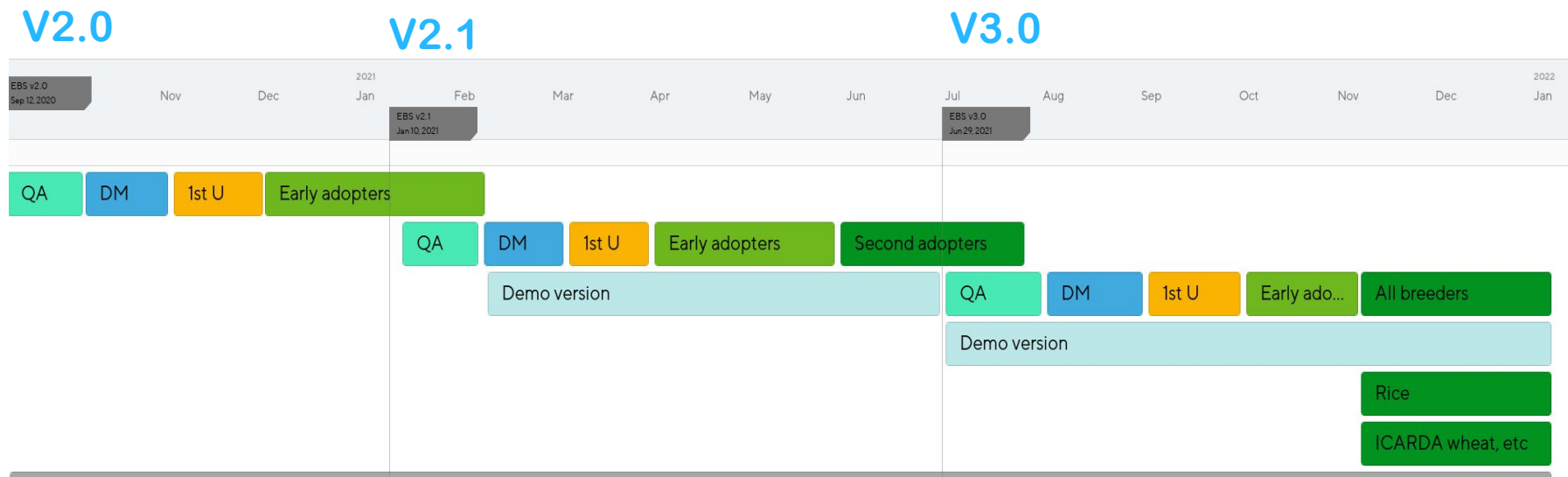


Data curation



Coordinate roll-out
EBS, training, collect
requirements

EBS Roll-out: CIMMYT maize and wheat and IITA maize





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