Process Improvement and Transformation of Breeding: a perspective

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Breeding Resource Services

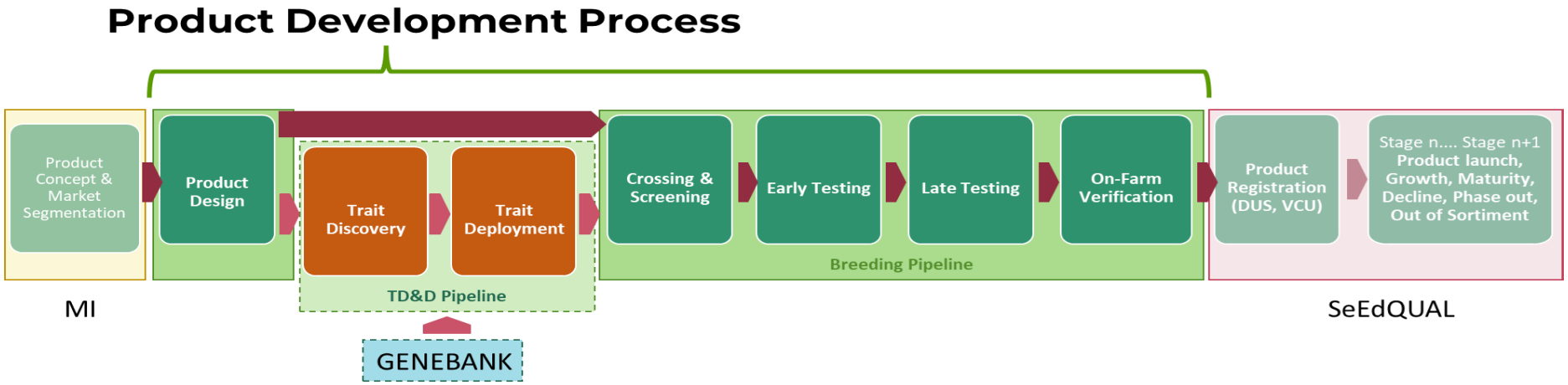
Breeding Transformation Agenda: key points

- **Harmonization**
- **Communication**
- **Transparency**
- **Quality focus**
- **Accountability**

Harmonization

- Facilitate and Drive Communication

  Vocabulary/Terms/Definitions



- Drive Efficiency in Processes

  Operations (field and lab)

  Role of all processes: deliver quality product

- Requires Flexibility

  Watchout: Allow creativity in science

Harmonization (Win-Wins)

Facilitate and Drive Communication

- Vocabulary/Terms/Definitions

Drive Efficiency in Processes

- Operations (field and lab)

Requires Flexibility

- Allows creativity in science and process improvement

Facilitate process improvements

- **Allow new technology implementation AND development**
- **Software development**
- **Technology (genomics/genotyping, field processes)**
- **Infrastructure development and enhancements**
- **Equipment**

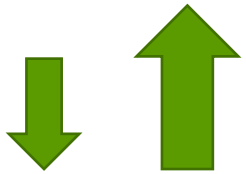
Inter-Group Organizational Learning

- **Scientific exchange**
- **Process improvements**
- **Build credibility**
- **Self-determination**

Communication

Leadership

Consistent



Customer Focus (internal/external)

Within Teams

Across Teams

Across Groups

Stakeholders (external/internal)

Transparency

Facilitates cross-organization communication

Promotes additional/different/new perspectives

Builds trust and confidence

Enables evaluation

Quality focus

Breeding Operations: “manufacturing” process

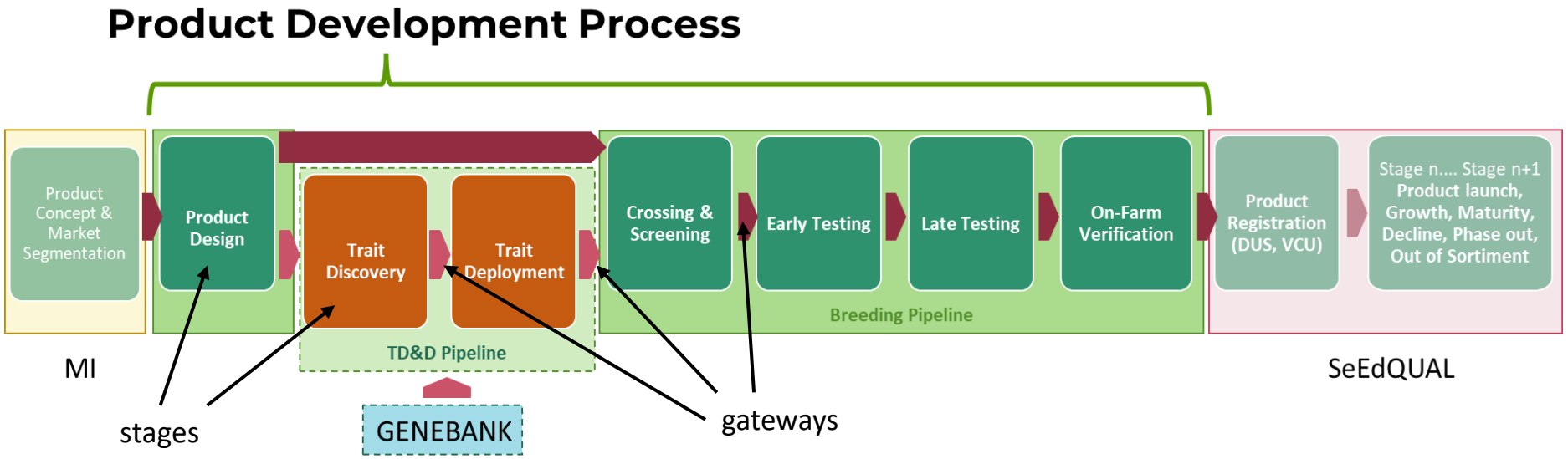
Product produced……. **DATA**

- Allows decision-taking
- **Excellent/good quality data > correct/good decisions**

Process improvement’s goal……to manufacture better data

Measured by Key Performance Indicators

*Driven by process improvement training



Product Development Process: KPI

KPI sub-team: Brigitte Uwimana, Xiaofei Zhang, Kevin Pixley, Arlo Thompson

	Proposed Key Performance Indicators		Proposed Key Performance Indicators
1	Attain genetic gain targets	14	Site management achieves >85% high data quality
2	Breeding Portal is single source for MS/TPP	15	Digitized data capture & focused on advancements
3	Clear, concise TPPs drive mid/long term focus	16	Use of databases: EBS, BreedBase, BMS
4	MS/TPPs guide resource prioritization (Tiers)	17	Checks that are elite for TPE
5	Active current TDD projects maintained and updated quarterly	18	Advancement decisions are jointly conducted
6	All crops follow harmonized practices to assess trait value and ROI of TDD	19	Aggressive early testing, representing TPP & TPE
7	Minimize recycle time with process/technologies	20	Products advanced to OFV provide added value
8	Recycling of pre-elite/elite parents (>90%)	21	OFVT represent TPE @ 30+ locations
9	Use of selection indices	22	Gender disaggregated data from OFVT
10	QC genotype parents and advanced trial entries	23	Develop external networks with partners
11	Monitor genetic diversity long term	24	Training in continuous improvement, all levels
12	Employ Brding Scheme Mgr to define selection schemes: Breeding &TD&D	25	Continuous process improvement in all planning
13	Minimum level of acceptable trial / data quality	26	Team evaluation: Breeding success

Accountability

Pertains all to process groups impacting Product Development

- Define clear expectations and deliverables
  - Field/lab laborers through to leadership
- Engage/support operational processes
- Engage/learn from other groups & crops
- Training, Training, Training
- Measure process improvement as **trend**
- Deliver value to customers

Transformation of Breeding

- Dependent on Harmonization
- Facilitated by Communication
- Enhanced by Transparency
- Driven by Quality focus=good decisions
- Results from Accountability

Thank you!

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