

Digital Agriculture



**Delivering
Data-Driven Decisions
for the
Business of Farming**



THE UNIVERSITY OF
SYDNEY

**Sydney Institute
of Agriculture**

Digital agri-food and fibre systems - goals

- **Increased efficiency, profitability and sustainability with respect to the use of inputs such as labour, nutrients, water, energy, and agrochemicals.**
- **Greater traceability and marketability of individual farm commodities and food and fibre products.**
- **Greater adaptability to changes in the environment and in consumer/market requirements (e.g. quality, nutrition, size).**
- **Ability to deliver the quantity and quality of commodities and products and meet the challenges of maintaining soil, food and nutrition security.**

Digital agri-food and fibre systems - goals

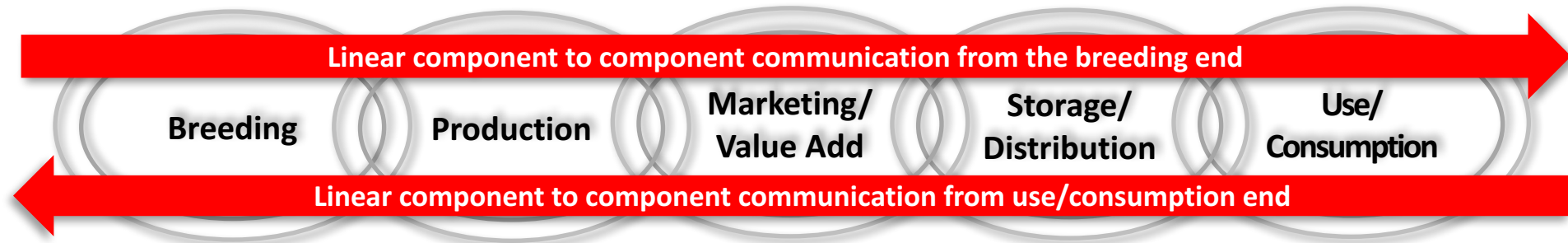
Components of the systems



Production/Distribution/Consumption

Digital agri-food and fibre systems - goals

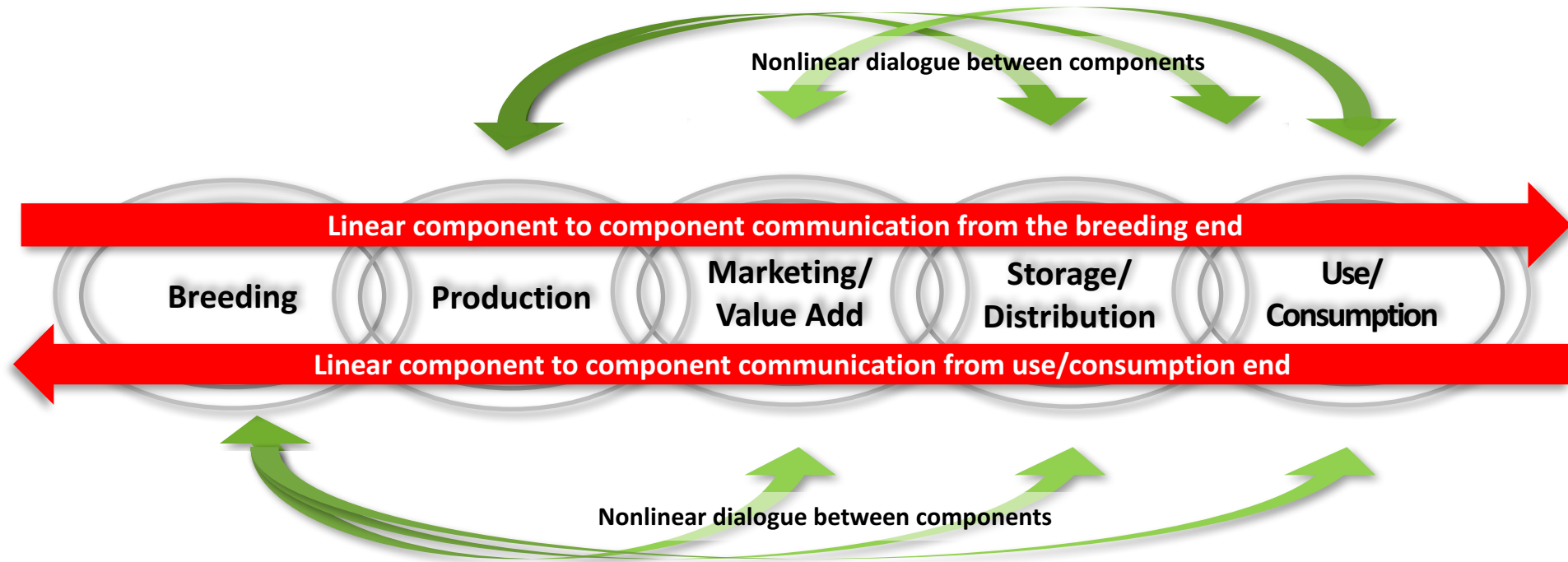
Communication between components of the systems



Traditional linear communication pathways

Digital agri-food and fibre systems - goals

Communication between components of the systems



Enable connections and build extensive system-wide communication that is facilitated by data gathering and utilisation

Digital agri-food and fibre systems - goals

Meeting the goals

- **These systems will need to identify, gather and use relevant digital data in a more diagnostic way to optimise management and outcomes across all aspects of the breeding and selection (crops and animals), production, marketing, distribution, retail and consumption sectors.**

A great global challenge for young, considerate minds

New stream for agricultural education

- Knowledge of basic biology of animals, plants, pests and diseases.
- Understanding of farming systems and critical decision points.
- Identify, design and apply engineering solutions, sensing technologies, data capture platforms to capture critical information.
- Evaluate supply chains in food and fibre industries
- Analyse/integrate data to devise business-optimal management plans in food and fibre industries.

