

# Accelerating the Role of Sustainable Agriculture for Zero Hunger and Increased Food Security A Panel Discussion

Moderator: Dr. Ajit Maru

Ranveer Chandra

Dr. Zhou Xu

Aswani Akella

Shankar Sivaprakasam

**gODAN**

**Global Open Data**

for Agriculture & Nutrition

<http://www.godan.info>

# Discussion Points

- How can we utilize the geospatial and digital data ecosystem to effectively increase food production, reduce wastage, and ensure timely delivery of primary food sources towards reaching the goal of zero hunger and sustained and reliable food security?
- Apart from farmers, as the primary producers, sustainable agriculture and food crops for zero hunger is the collective responsibility of policy makers, private industry, technologists, civil society, and financiers. What role is there for each player in this ecosystem?
- Sustainable agriculture is a balancing act between environmental management, and socio-economic needs. How can we increase farmland efficiencies to support the global population while at the same time minimizing the impacts on the environment, including climate change?
- How can we build greater capacities for farmers with respect to technology awareness and adoption that can not only increase food productivity, but also cater to the growing environmental impact of agriculture?
- What are some key challenges stakeholders are facing and their possible solutions?

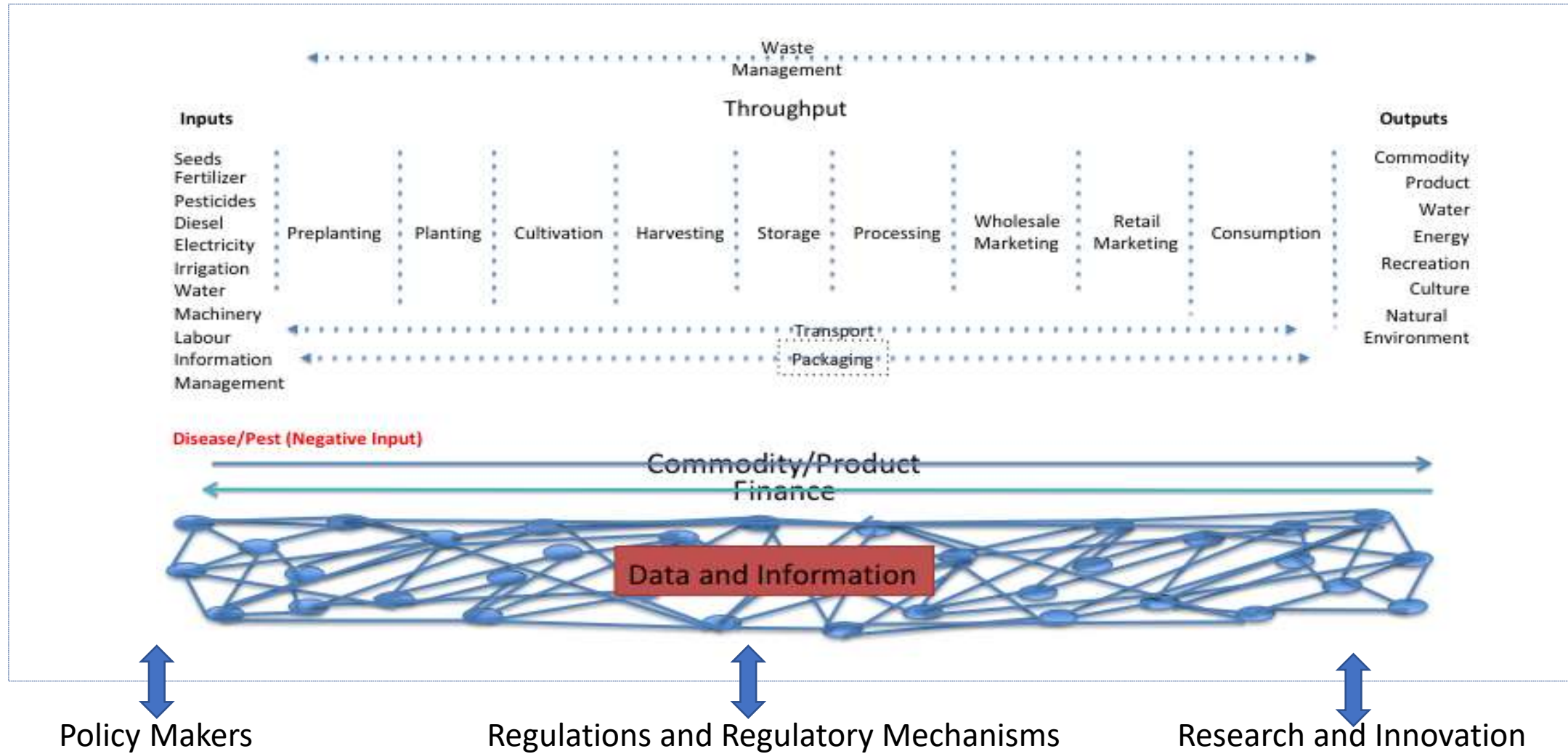
# Paradigm Shifts in Agri-food Systems

- Agriculture almost everywhere across the world is becoming increasingly market driven.
- The markets for agricultural commodities are highly competitive and globalized.
- 80 % of the World's food supply is produced by Smallholder farmers
- There is increasing urbanization (estimated to be 70% by 2050) that needs long, complex agricultural commodities and products market and value addition chains many spanning several continents
- These long complex market chains have a multitude of actors and stakeholders
- There is increasing scarcity of natural resources such as land, water, soil nutrients and fossil fuel based energy needed for agriculture

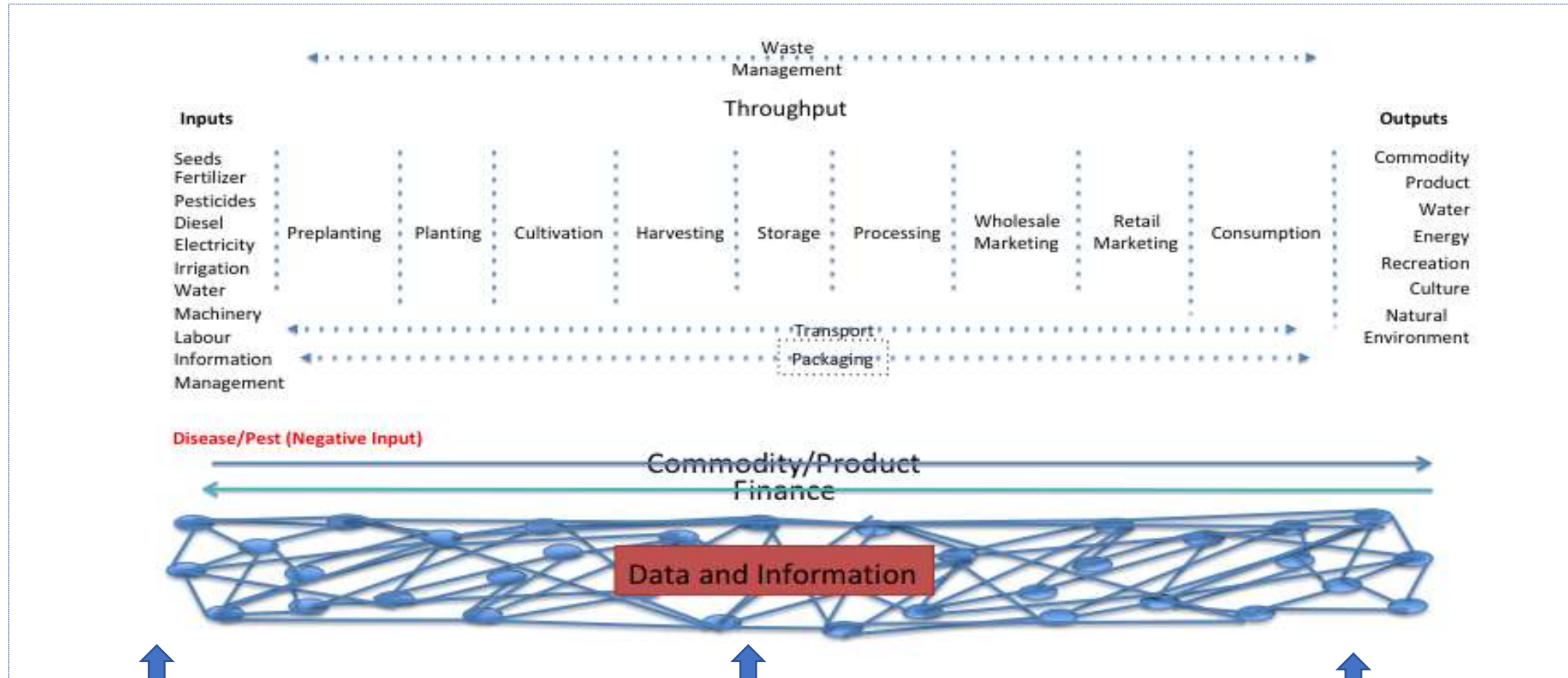
# Paradigm Shifts in Agri-food Systems

- The threat of Climate Change for agriculture is increasingly demonstrated by extreme, aberrant weather affecting farm production and productivity.
- The current practice of intensive agriculture is largely considered detrimental to the environment and contributor to green house gases and consequent climate change. There is also its corollary, ie., agriculture's role in managing the environment for better.
- Farm production is now not the only factor to be considered in the fight against hunger and extreme poverty.
- Included in this fight are also issues of productivity and profit as also gainful livelihoods.
- Food consumers now not only demand food to be available and accessible but also food which is nutritious, of high quality, safe and ethically produced.
- Bringing efficiencies of all process from farm input, cultivation, processing, transportation and logistics, human and livestock consumption and waste management is now the complex challenge in reaching the goal of zero hunger and alleviation of extreme poverty

# Data and Information Flows in Agri-Food Systems



# Data and Information Flows in Agri-Food Systems



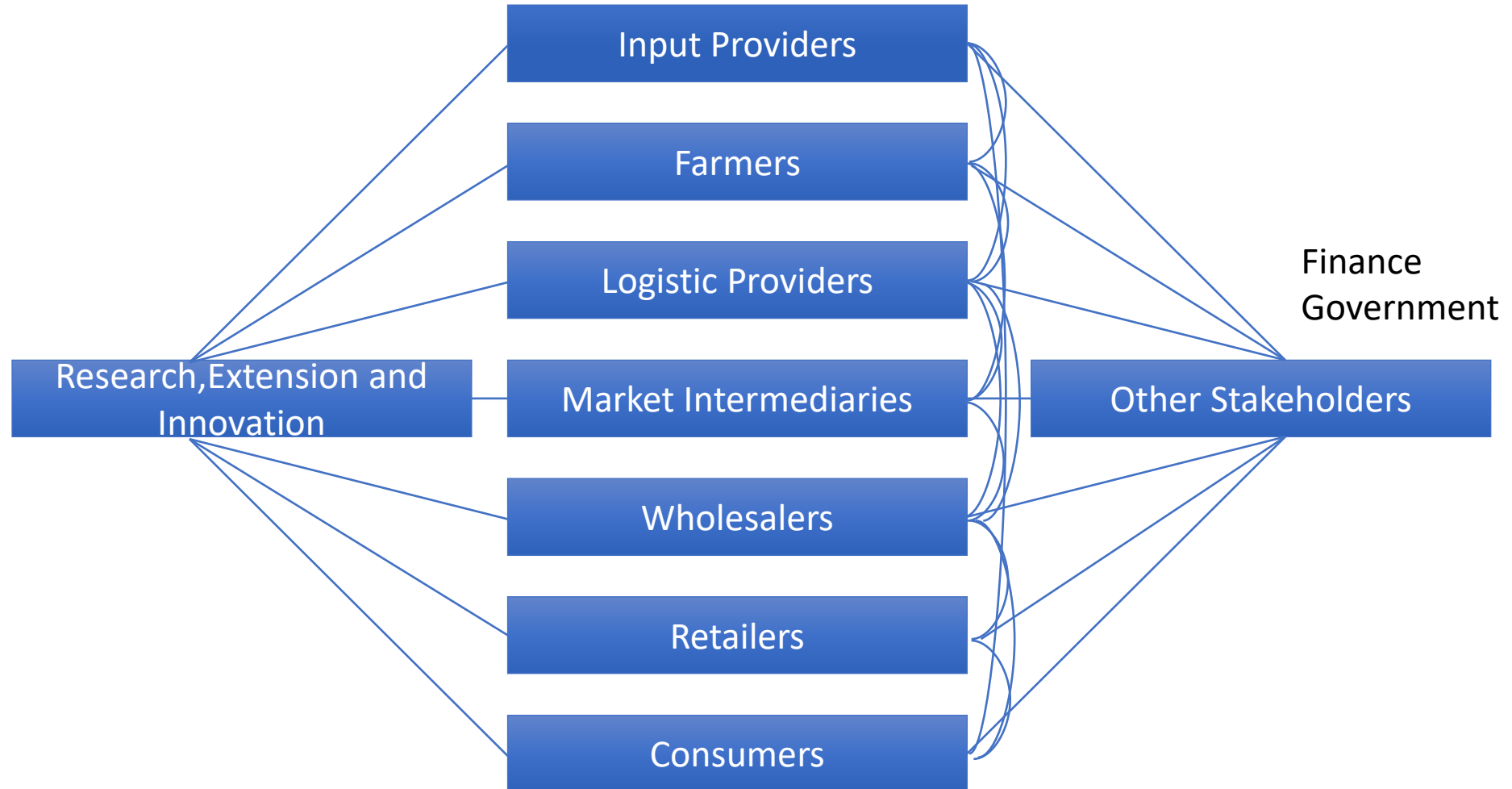
Policy Makers

Regulations and Regulatory Mechanisms

Research and Innovation

Effective use of geospatial and digital data shared openly in an Agri-food system contribute to incremental gains at each stage of an Agrifood System from farm inputs to consumption

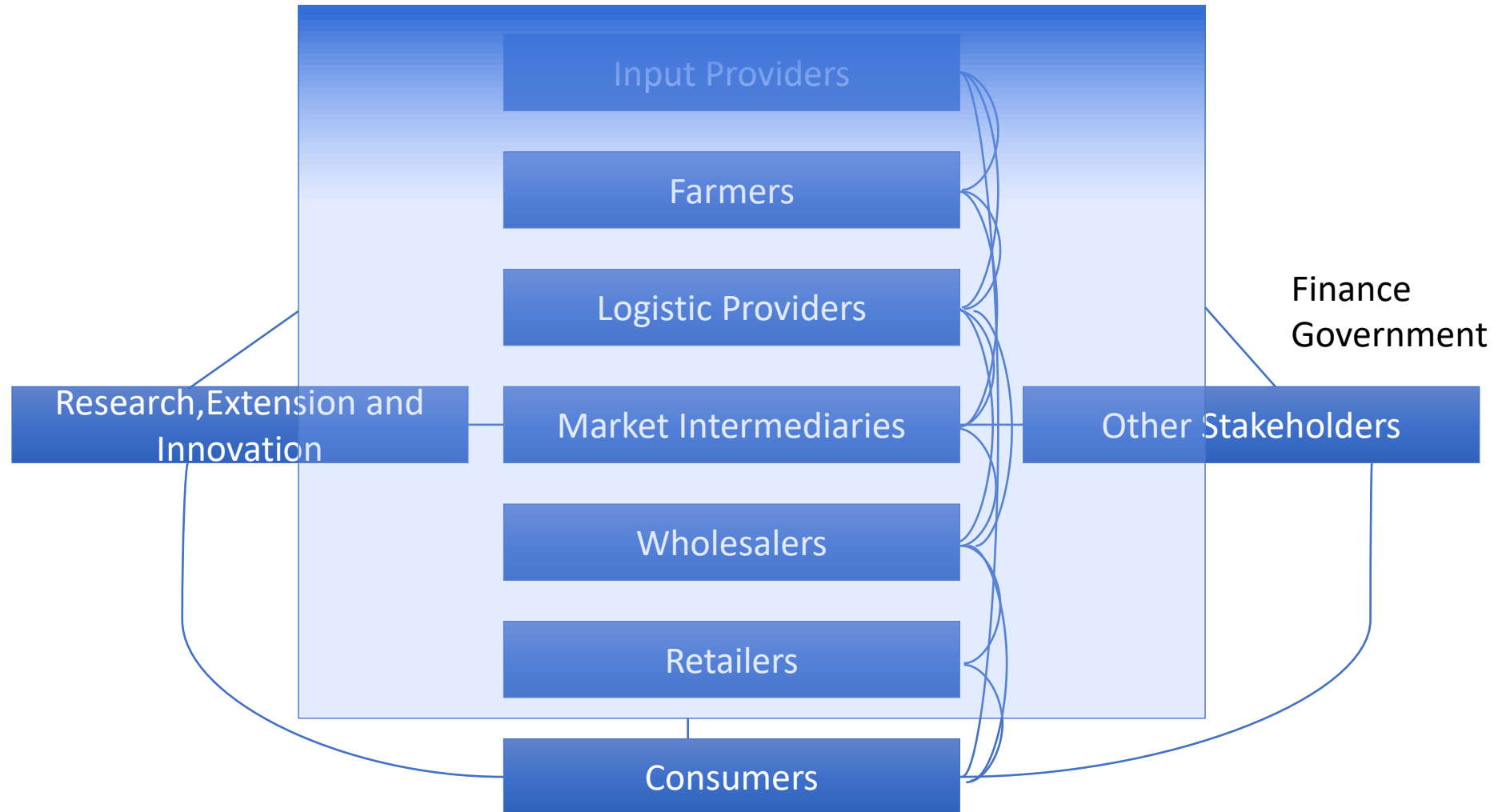
# Open and Closed Information Chains in Agri-food Systems



**Open, Laissez Faire Markets**

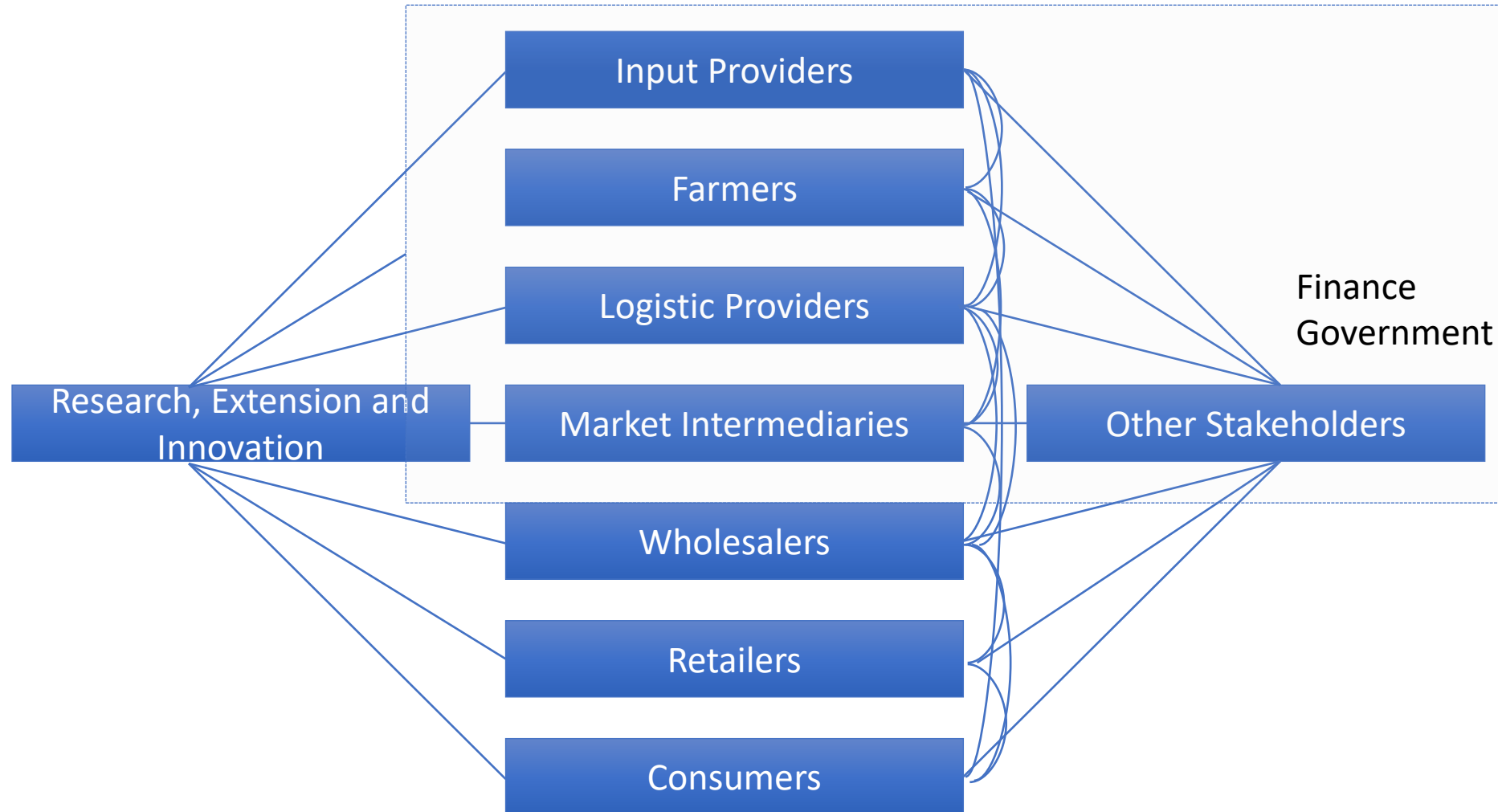


## Open and Closed Information Chains in Agri-food Systems



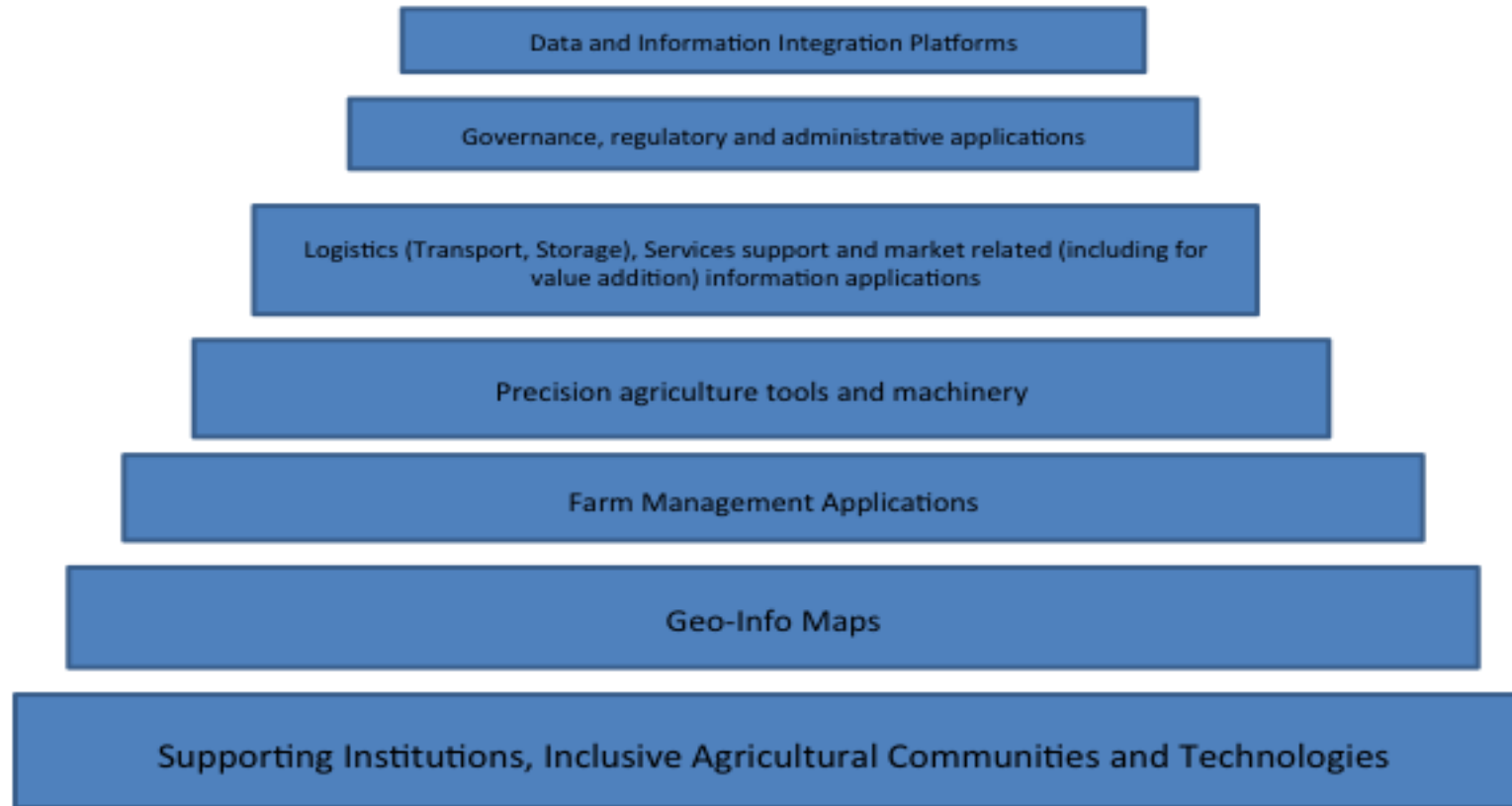
**Super Markets and Fast Food Restaurant Chains in Developed Countries**

# Open and Closed Information Chains in Agri-food Systems

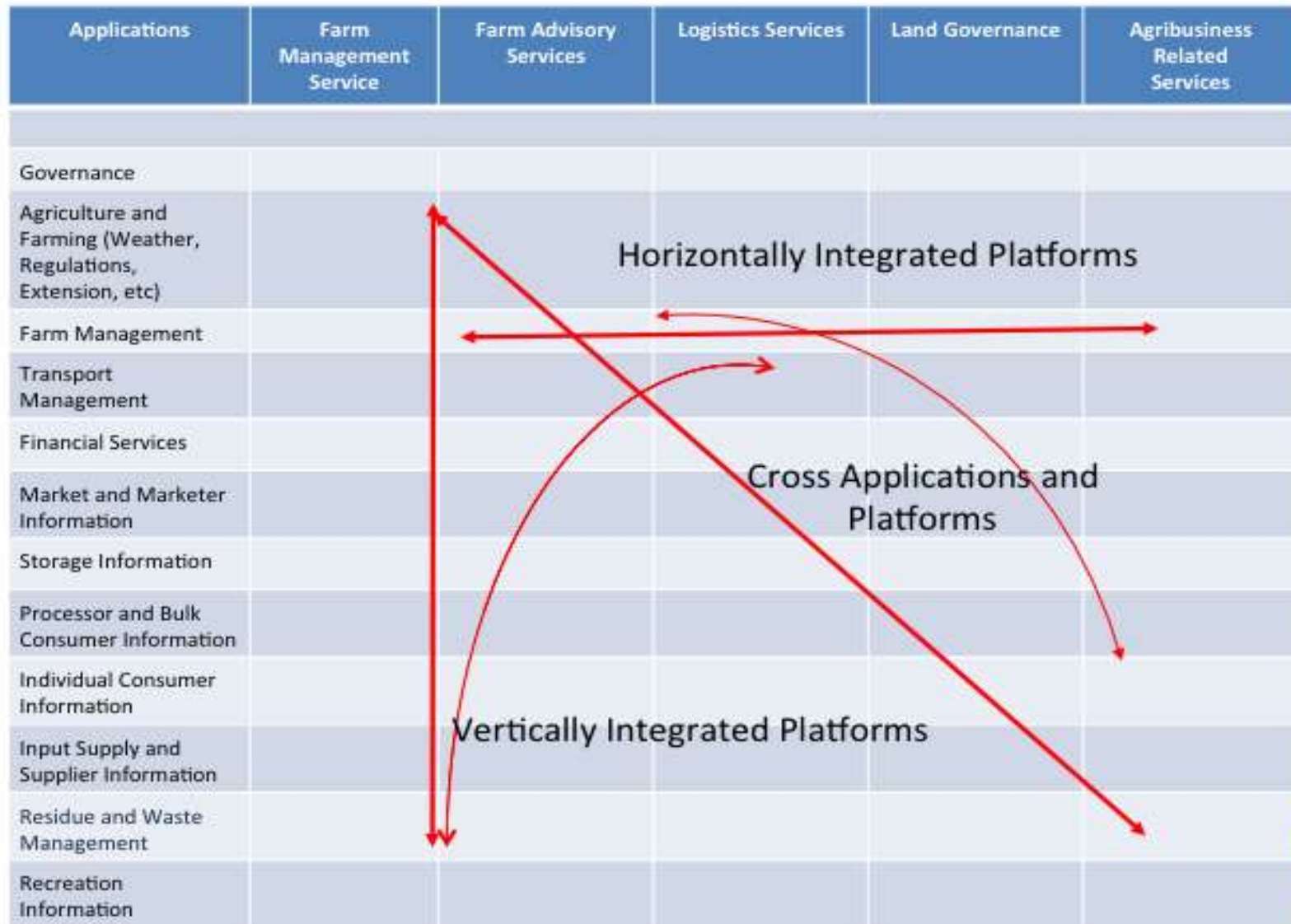


**Cooperatives and Producer Companies**

## Building Data and Information Ecosystems for Smallholder Farmers



# Digital Platforms



Thank You



amaru\_in(at)yahoo.com

<http://www.godan.org>