Delivering the agrifood system’s potential for...

Healthy People
1. Better diets
2. One Health/Prevention of zoonotic diseases
3. Improved food safety

Healthy Planet
4. Reduction in GHGs
5. Reduction in pollution
6. Improved land, water and food loss and waste (FLW) management

Healthy Economies
7. Promotion of productivity growth
8. Increased job creation
9. Maintaining trade flows

...is one of the most vexing challenges of our time
The food system is large and complex, with many actors

UPSTREAM

$939.5 billion
USD in value

102,500
Enterprises in Agricultural Inputs and support

Millions
of Retailers

FARMERS

570 million
FARMS WORLDWIDE

DOWNSTREAM

$3.7 trillion
USD in value

368,500
Enterprises in food processing and logistics

Millions
of Retailers
Transaction costs and information asymmetry

- Search cost to find the business partner
- Establishing sales parameters, volumes, quality
- Negotiating a return policy
- Negotiating the price

Searching for information
Using Information
Policing and enforcing policies and transactions based on information
Impact on-farm but also beyond for the whole agrifood value chain

Collect, use, and analyze massive amounts of machine-readable data about practically every aspect of the value chain

Feedback loop to inform all aspects of the value chain
Solving old issues but creating new risks

Opportunities
- Increase market efficiency and competition in the value chain
- Narrowing of economic, spatial, and social divides in rural areas
- Better use of scarce resources

Risks
- Increased market power to a few digital technology providers.
- New digital divide and new social risks with misuse of data
- Rebound effect

Efficiency
Equity
Environmental Sustainability
Three foundational enablers

- Open data and digital skills
- Digital infrastructure
- Non-digital enablers
Strengthen access to foundational data and promote data sharing

Core Agricultural Data on Soil Quality

Pests and Disease Surveillance

Weather Conditions

Market Prices

Foundational Data
Data Privacy
Data Ownership
Data Security
Review regulations that may constrain the adoption of technologies that enable precision agriculture.
Enable competition in digital markets

Market power

- Consumer choice (avoiding lock-in)
- Consumer data protection
- Switching costs
- Market Structure
- Personal data markets or data trusts
- Digital data commons
Supporting development of digital payment systems.
Support digital entrepreneurship ecosystems

**Government action**
- E-agriculture policies
- AgTech start-up policies
- Regulatory sandboxes

**Regulations**
- Use Cases
- Finance
- Data

**Scaling**
Institutional innovation for cooperation between government, publicly funded research and private sector for better commercial applicability.

Invest in transformational research and development.
Complementary policies to share the benefits equitably

Equitably Connected Digital Community

- Protecting the Marginalized
  - Adopting compensatory measures for those harmed in digital transformation

- Access to DT or Marginalized Groups
  - Secure land rights, digitally enabled regulations, and improve access to mobile money

- Women and Girls
  - Empowering female digital entrepreneurs through focused policy and access to resources and network