ICTs for agriculture = e-agriculture

TELEPHONE
Interactive voice response

MOBILE
Advisory, sales, banking, networking

COMPUTERS AND WEBSITES
Agriculture information and markets

INTERNET AND BROADBAND
Wi Fi
Knowledge sharing social media, e-community, banking, market platform, trading, etc.

BROADCASTING
Expertise sharing, advisory, community

SENSOR NETWORKS
Real time information, better data quantity and quality, decision making

SATELLITE
Weather, universal accessibility, remote sensing

DATA STORAGE AND ANALITYCS
Precision agriculture, actionable knowledge

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Agriculture and the SDGs

There is enough food produced to feed everyone in the world, however about 800 million are chronically hungry

1/9 people suffers from hunger

1/3 of food production is lost or wasted

1/3 farmland degraded

75 % crop genetic diversity lost

22 % animal breeds at risk

Average age of farmers is increasing

Women own less land and lack access to resources.

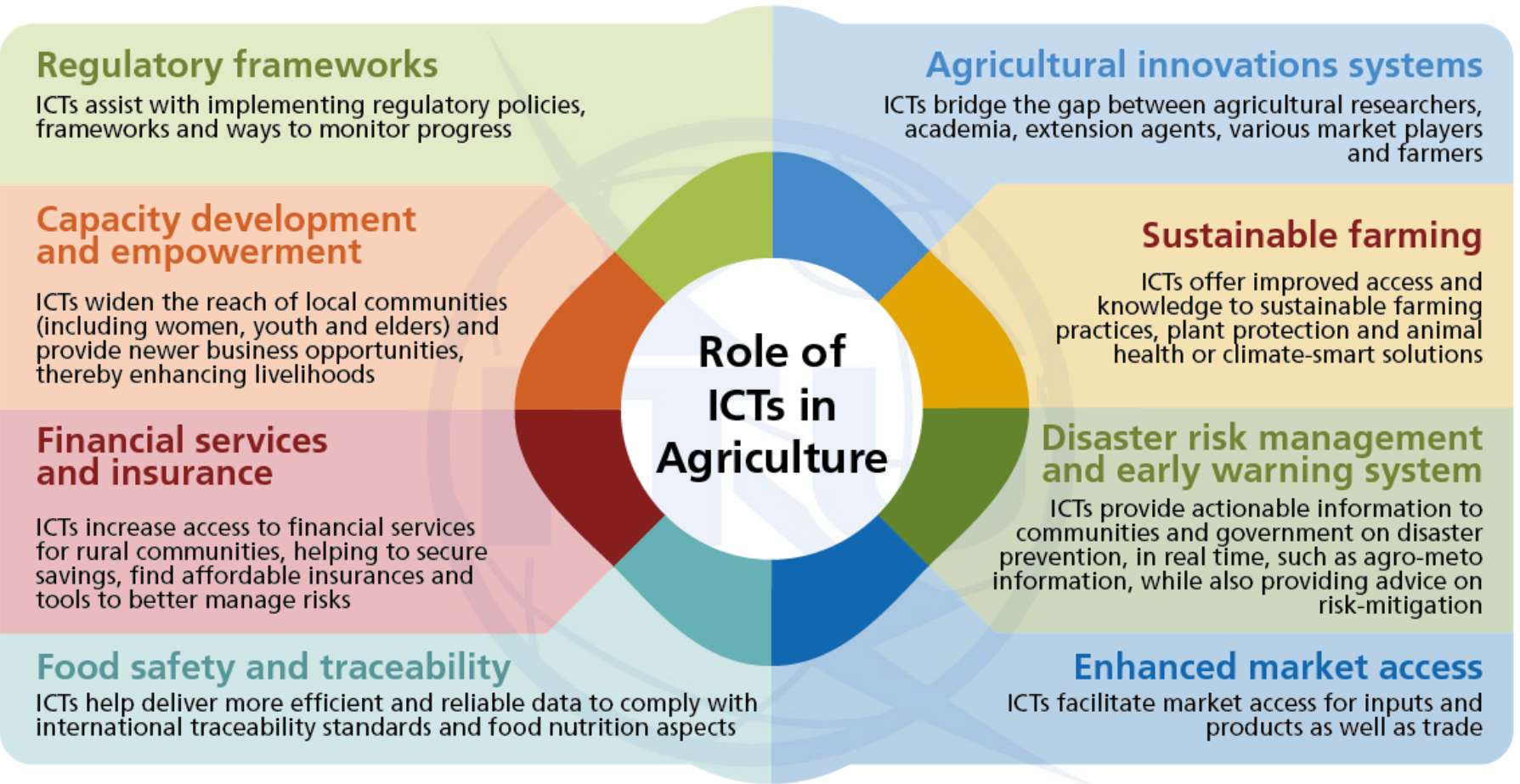**World Summit on the Information Society (WSIS)**

Geneva, December 2003

Tunis, November 2005

Geneva Plan of Action
WSIS Action Line

C7. ICT applications:
benefits in all aspects of life
'e-agriculture'

www.fao.org/3/a-i4605e.pdf

Role of ICTs in Agriculture

Regulatory frameworks
ICTs assist with implementing regulatory policies, frameworks and ways to monitor progress

Capacity development and empowerment
ICTs widen the reach of local communities (including women, youth and elders) and provide newer business opportunities, thereby enhancing livelihoods

Financial services and insurance
ICTs increase access to financial services for rural communities, helping to secure savings, find affordable insurances and tools to better manage risks

Food safety and traceability
ICTs help deliver more efficient and reliable data to comply with international traceability standards and food nutrition aspects

Agricultural innovations systems
ICTs bridge the gap between agricultural researchers, academia, extension agents, various market players and farmers

Sustainable farming
ICTs offer improved access and knowledge to sustainable farming practices, plant protection and animal health or climate-smart solutions

Disaster risk management and early warning system
ICTs provide actionable information to communities and government on disaster prevention, in real time, such as agro-meto information, while also providing advice on risk-mitigation

Enhanced market access
ICTs facilitate market access for inputs and products as well as trade

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Applications of e-agriculture

Video

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of the United Nations**

As from early 2000's VERCON continues after pilot phase at a national scale
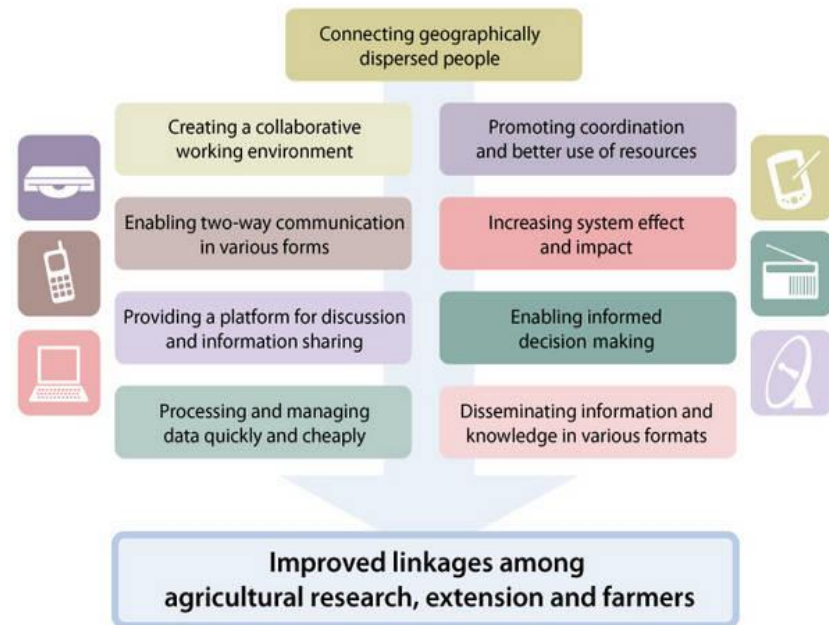
From VERCON to
Single Window System

=

Entry point for the farmer
to get information on agriculture
advisory services
and financial instruments

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Reduce the triple divide : digital, rural and gender

7 factors of success

- Success factor 1: Content
- Success factor 2: Capacity development
- Success factor 3: Gender and diversity
- Success factor 4: Access and participation
- Success factor 5: Partnerships
- Success factor 6: Technologies
- Success factor 7: Sustainability

9 principles for digital development

Design With the User	Understand the Existing Ecosystem	Design for Scale
Build for Sustainability	Be Data Driven	Use Open Standards, Open Data, Open Source, and Open Innovation
Reuse and Improve	Address Privacy & Security	Be Collaborative

Addressing key building blocks

Leadership and Governance | Strategy and Investment | Services and Applications | Infrastructure | Standards and Interoperability | Content, Knowledge Management and Sharing | Legislation, Policy and Compliance | Workforce and Capacity Development
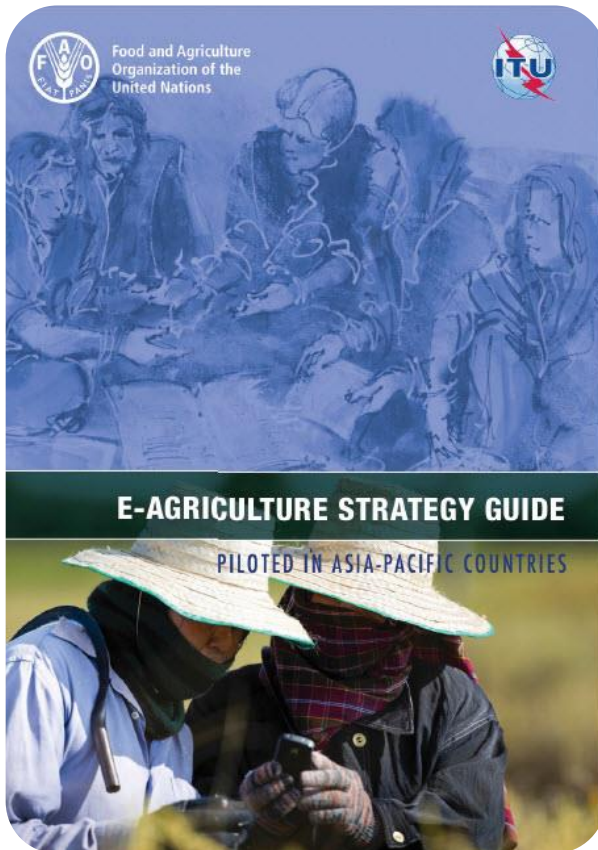
Identifying required e-agriculture components

- Infrastructure
- Interoperability
- Reliable Data
- Data sharing/ privacy
- Policies & Regulations

- Digital Literacy
- Gender-Digital Divide
- Data Analytics
- Capacity Development
- Support to Innovations

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E-agriculture strategy guide

This framework is used to assist countries to identify, design and develop sustainable ICT solutions/services to overcome challenges faced in agriculture or to accelerate achieving national agricultural goals.

English: www.fao.org/3/a-i5564e.pdf
Russian: www.fao.org/3/I9515RU/i9515ru.pdf
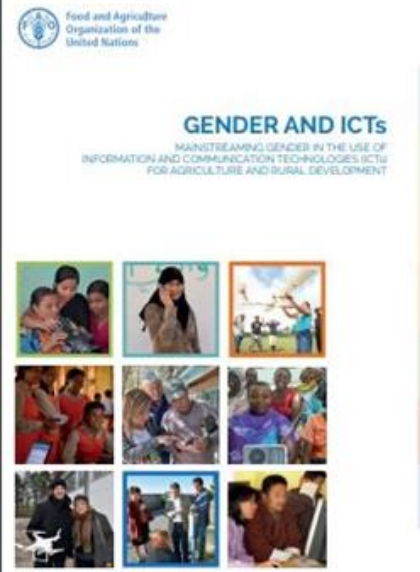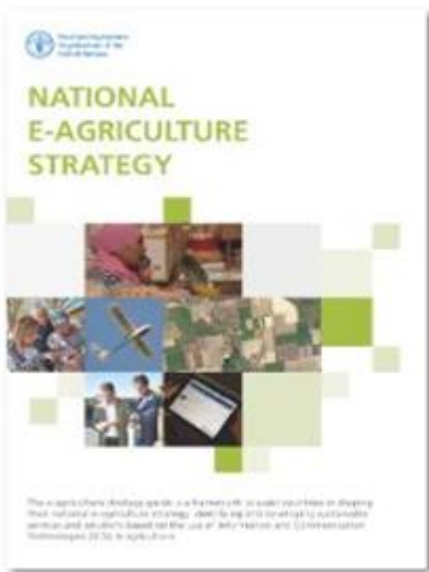
Developing national e-agriculture strategy

Ministry of Agriculture

Agriculture Policy

Department of Agriculture, Livestock, Fisheries, Forestry

Ministry of Communication and Information Technology

IT/Digital or e-Governance Policy

Department of Telecom, IT, telecom regulator, e-Governance agency

National e-agriculture strategy
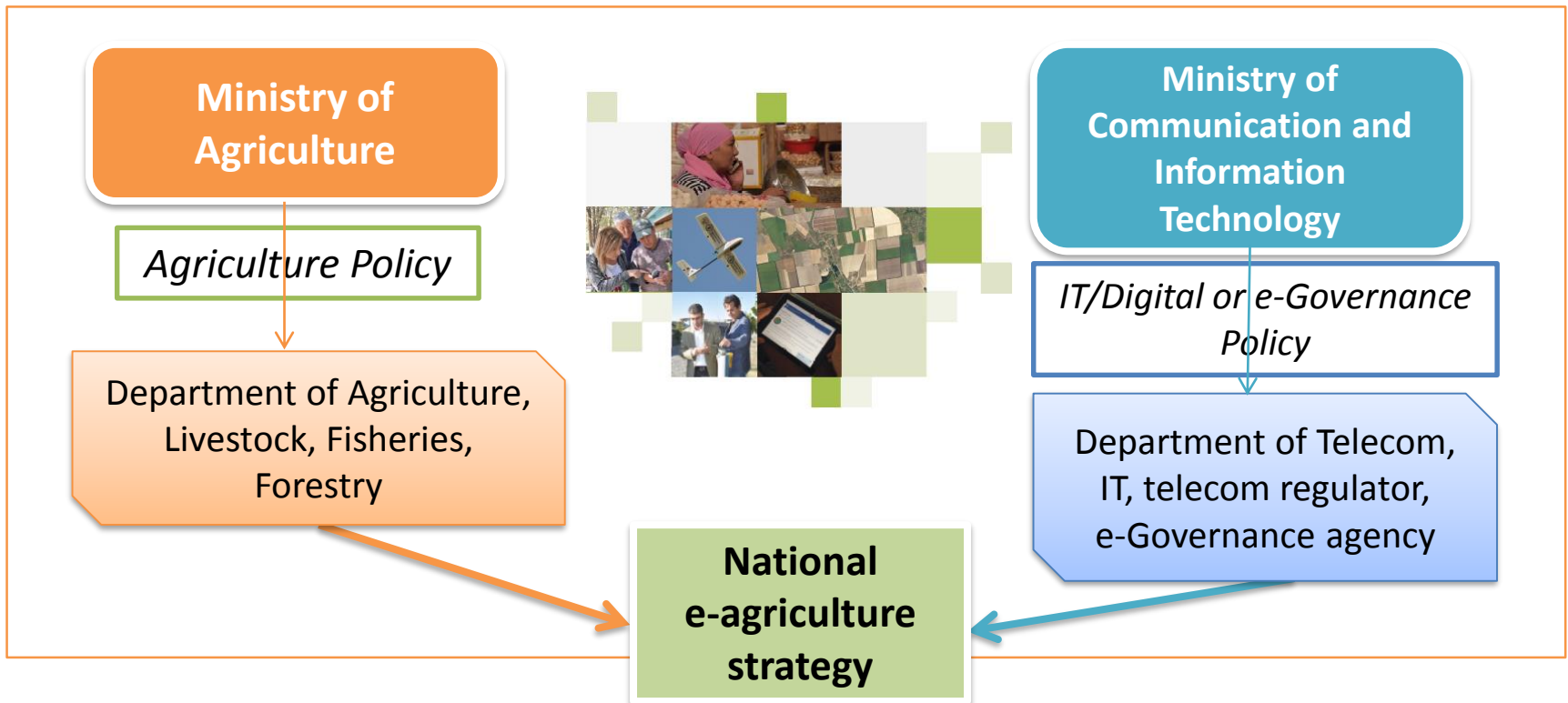
National e-agriculture strategy
is a comprehensive framework to develop sustainable e-agriculture services and solutions

Thank you

For more information, contact sophie.treinen@fao.org