

ICT for Innovation and Entrepreneurship



12 September 2017

Colombo, Sri Lanka

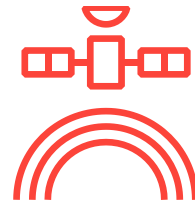
Sameer Sharma , Senior Advisor ITU

What we do



'Committed to
Connecting the World'

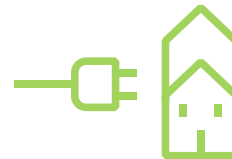
3
Sectors



ITU Radiocommunication
Coordinating radio-frequency spectrum and **assigning** orbital slots for satellites



ITU Standardization
Establishing global standards



ITU Development
Bridging the digital divide

Who are we?

Our members

193

MEMBER
STATES



+700

INDUSTRY &
INTERNATIONAL
ORGANIZATIONS



+150

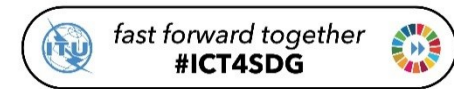
ACADEMIA
MEMBERS





ICTs and the SDGs

“The spread of information and communication technology and global interconnectedness has great potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies, as does scientific and technological innovation across areas as diverse as medicine and energy”. Agenda for Sustainable Development (Paragraph 15)



Fast forward the SDGs

Many of the Sustainable Development Goals (SDGs) will not be met unless we accelerate the pace of change. We need information and communication technologies (ICTs) to meet the SDGs.

Talk to us today about how ICTs can help achieve the SDGs.

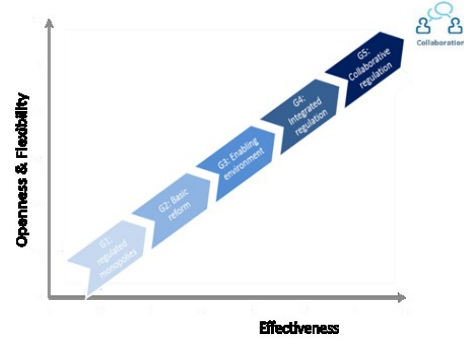
fast forward together #ICT4SDG

ICTs are catalytic drivers to enable the achievement of all the SDGs

Specifically referenced in the SDG targets:

- SDG4 Quality Education (4b)
- SDG5 Gender Equality (5b)
- SDG9 Industry, innovation and Infrastructure (9c)
- SDG 17 Partnerships for the Goals (17.8, as a means of implementation)

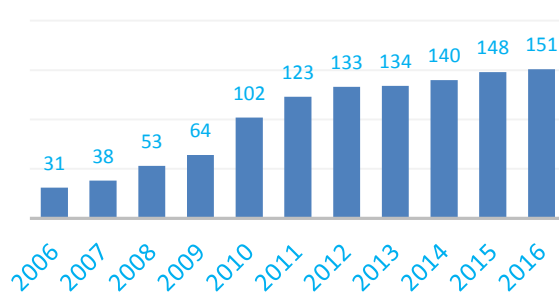




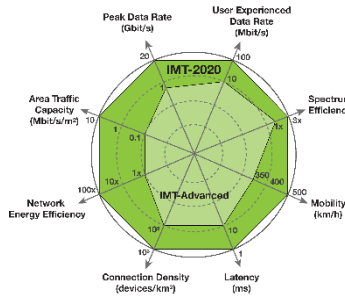
Evolution of ICT Regulation



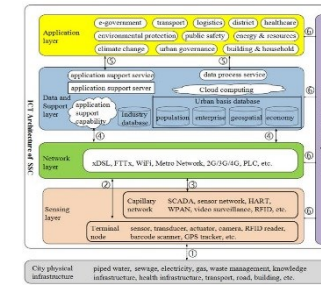
Smart Sustainable City Digital Society



National Broadband Plans



IMT 2020



IOT BIG DATA ANALYTICS AI SECURITY



Goal 1 Growth : Enable and foster access to and increased use of telecommunications/ICTs

55% of households should have access to the Internet

60% of individuals should be using the Internet

40% Telecommunications/ICTs should be 40% more affordable



GROWTH

Goal 2 Inclusiveness – Bridge the digital divide and provide broadband for all

50% of households should have access to the Internet in the developing world; 15% in the least developed countries

50% of individuals should be using the Internet in the developing world; 20% in the least developed countries

40% affordability gap between developed and developing countries should be reduced by 40%

5% Broadband services should cost no more than 5% of average monthly income in the developing countries



INCLUSION

90% of the rural population should be covered by broadband services



Gender equality among Internet users should be reached



Enabling environments ensuring accessible ICTs for persons with disabilities should be established in all countries

Goal 3 Sustainability – Manage challenges resulting from the telecommunication/ICT development

40% improvement in cybersecurity readiness

50% reduction in volume of redundant e-waste

30% decrease in Green House Gas emissions per device generated by the telecommunication/ICT sector



SUSTAINABILITY

Goal 4 Innovation and partnership – Lead, improve and adapt to the changing telecommunication/ICT environment

Telecommunication/ICT environment conducive to innovation

Effective partnerships of stakeholders in telecommunication/ICT environment

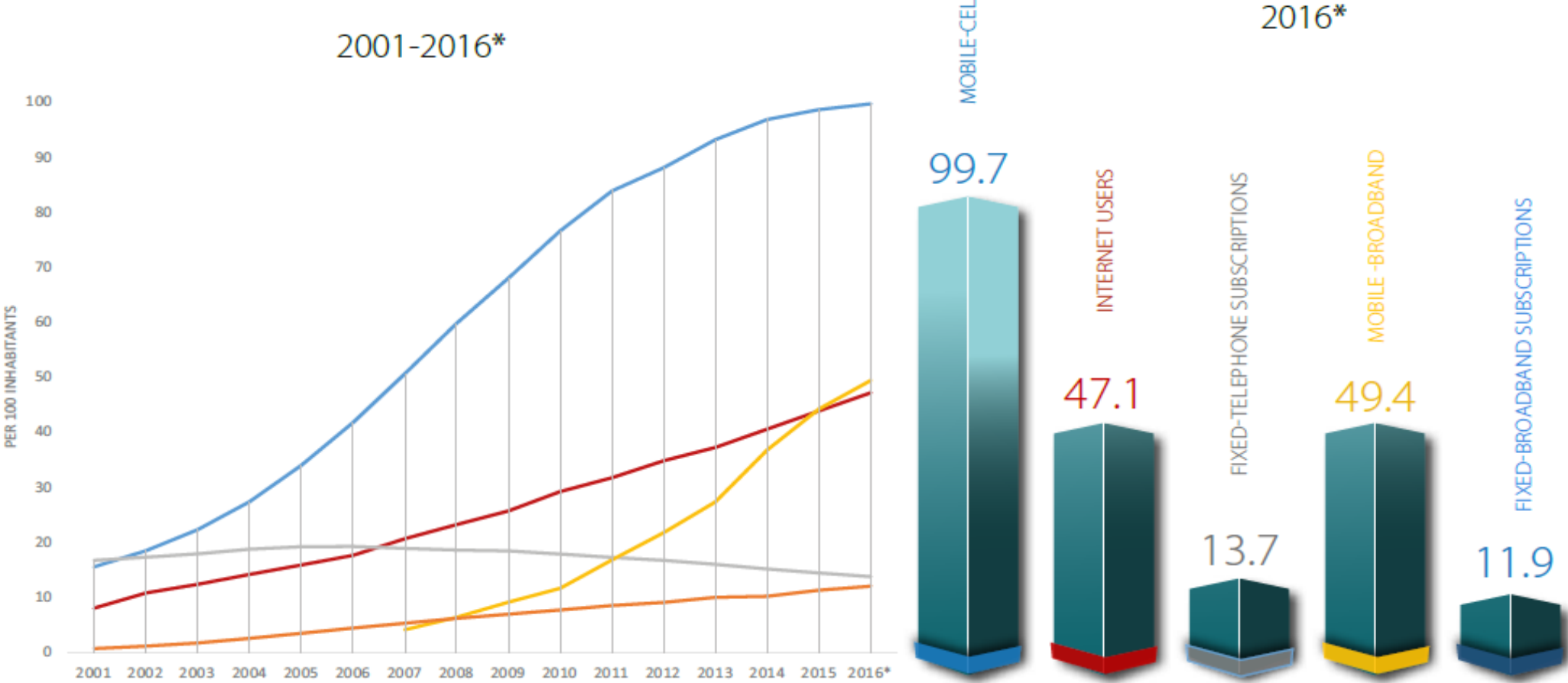


INNOVATION

Global ICT Developments Worldwide

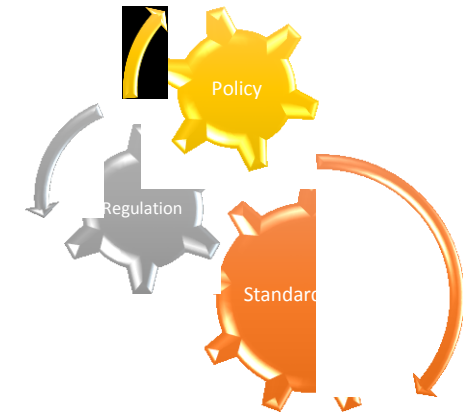
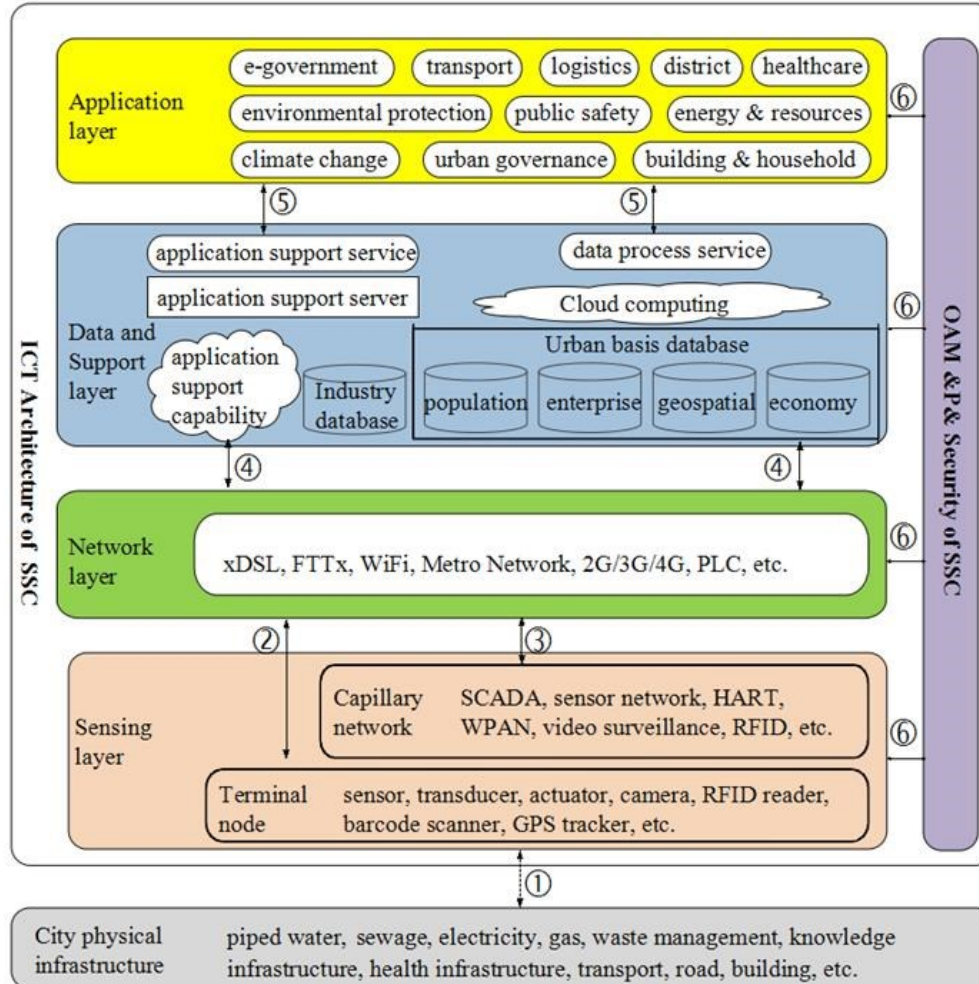
Note: *Estimates.

Source: ITU.





A multi-tier SSC ICT architecture from communication view (physical perspective)



Cross-Sector Collaboration	
Competition	Investment
Licensing	Spectrum
HetNets	Broadband
Cloud	IoT / M2M
Interoperability	QoS/QoE
Numbering & Addressing	
Big Data & Open Data	
Security	Privacy
Right of Way	Infrastructure Sharing
Green ICTs	e-Waste
Data Centres	
Emergency Telecommunications	

Figure source: ITU-T Focus Group on Smart Sustainable Cities: *Overview of smart sustainable cities infrastructure*



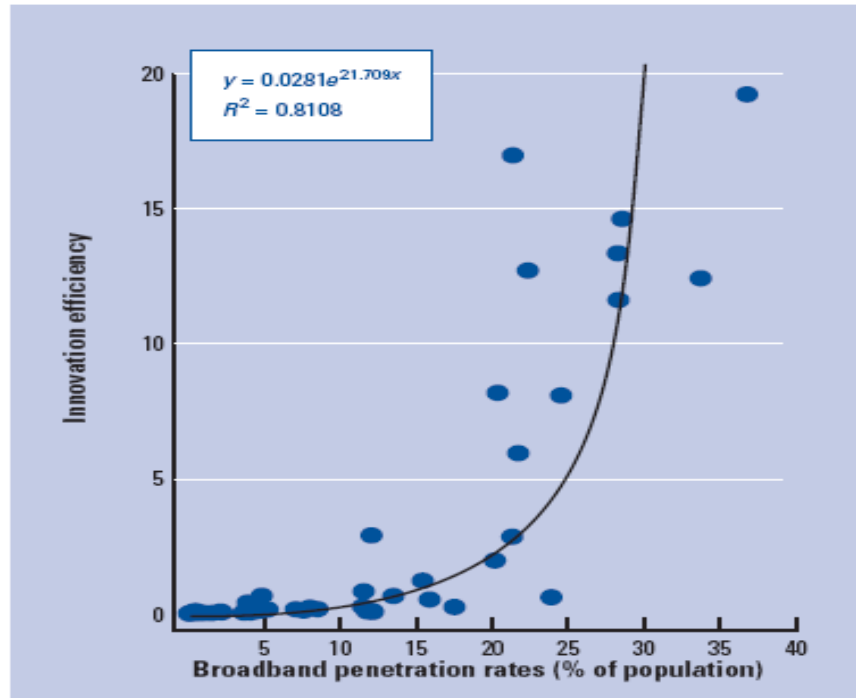
Definitions of Innovation

- Innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations” –OECD
- Innovation can be new to the world or new to the context
- “ICT affects business model, mindsets, organizational structures, R&D, markets, networks

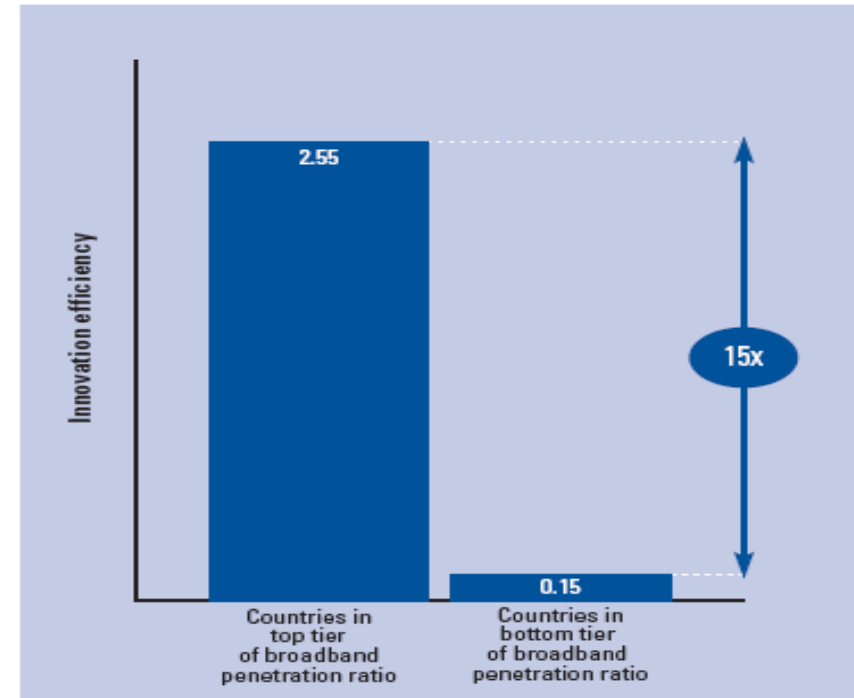


Impact of Broadband on Innovation

Innovation efficiency vs. broadband penetration



Innovation efficiency vs. broadband penetration ratio



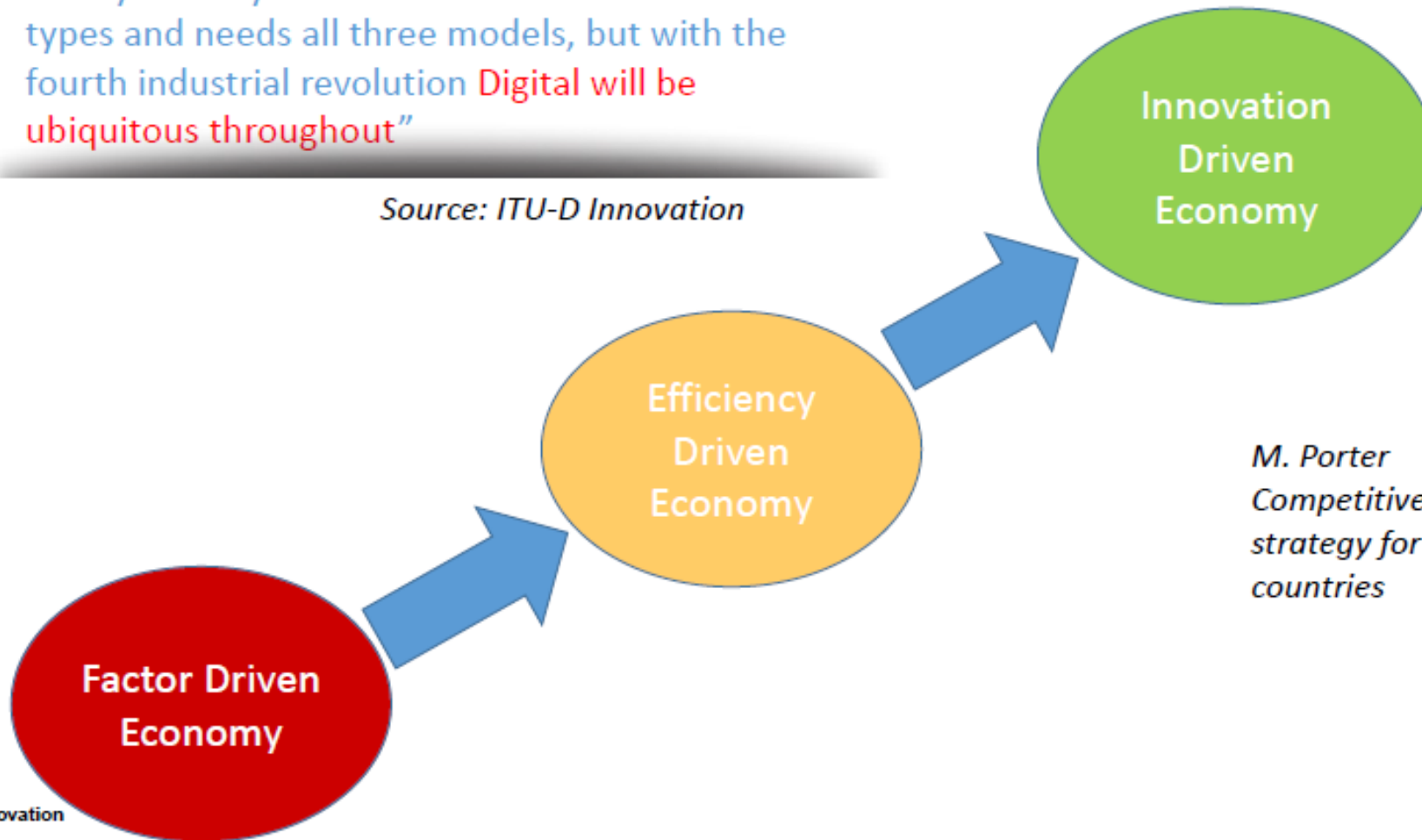
Broadband facilitates innovation and entrepreneurship
Countries with a higher penetration see greater innovation
Broadband stokes innovation and it does so exponentially



Innovation Driven Economy

“Every country has a combination of all three types and needs all three models, but with the fourth industrial revolution **Digital will be ubiquitous throughout**”

Source: ITU-D Innovation

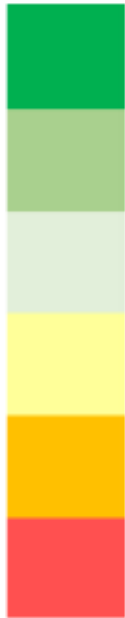


*M. Porter
Competitive
strategy for
countries*



Economies Don't Move Together

High digitization



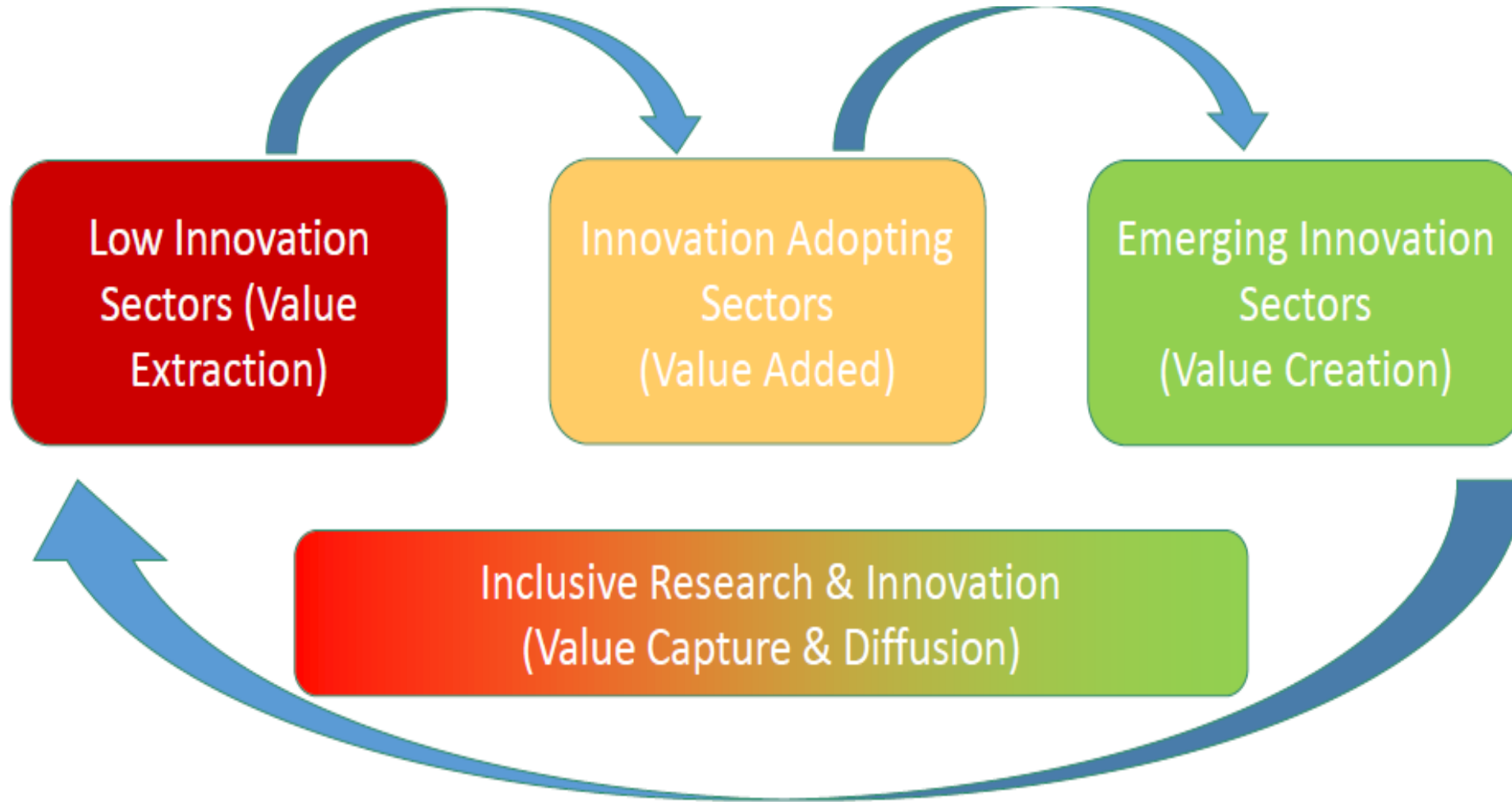
Low digitization

Sector Digitization

Sector	Digitization
ICT	High
Media	Medium-High
Professional Services	Medium-High
Finance and Insurance	Medium-High
Wholesale Trade	Medium
Advanced Manufacturing	Medium
Oil and Gas	Medium
Utilities	Medium
Chemicals and pharmaceuticals	Medium-Low
Basic goods manufacturing	Medium-Low
Mining	Low-Medium
Real Estate	Low-Medium
Transportation and warehousing	Medium-Low
Education	Low-Medium
Retail trade	Low-Medium
Entertainment and recreation	Low
Personal and local services	Low
Government	Low
Health care	Medium-Low
Hospitality	Low
Construction	Low
Agriculture and hunting	Low



Accelerating Inclusiveness Between Sectors





Stakeholder Ecosystem

Public Sector

"We need to promote job creation & innovate our Government services!"

Entrepreneurs

"We need room to take risks + Our government does not listen to us"

Academia

"We need to prepare our students to be entrepreneurs"

"A lot of our innovations don't reach the market"

Entrepreneurial Support Networks

"These entrepreneurs are not business thinkers!"

"We need global ecosystem linkages!"

Private Sector

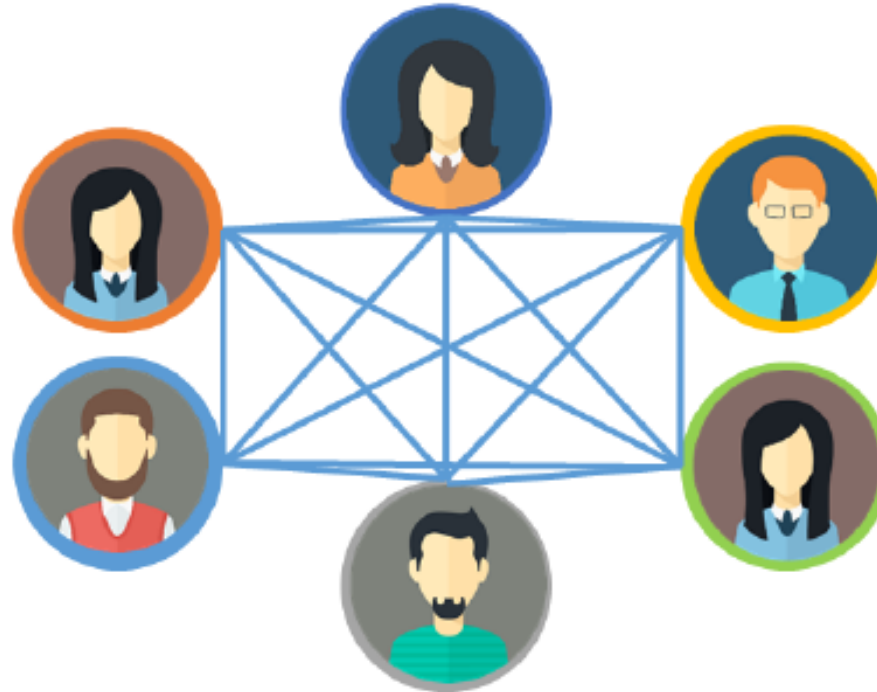
"We need support to scale and go global."

"We need new ideas, demand, and growth"

Finance

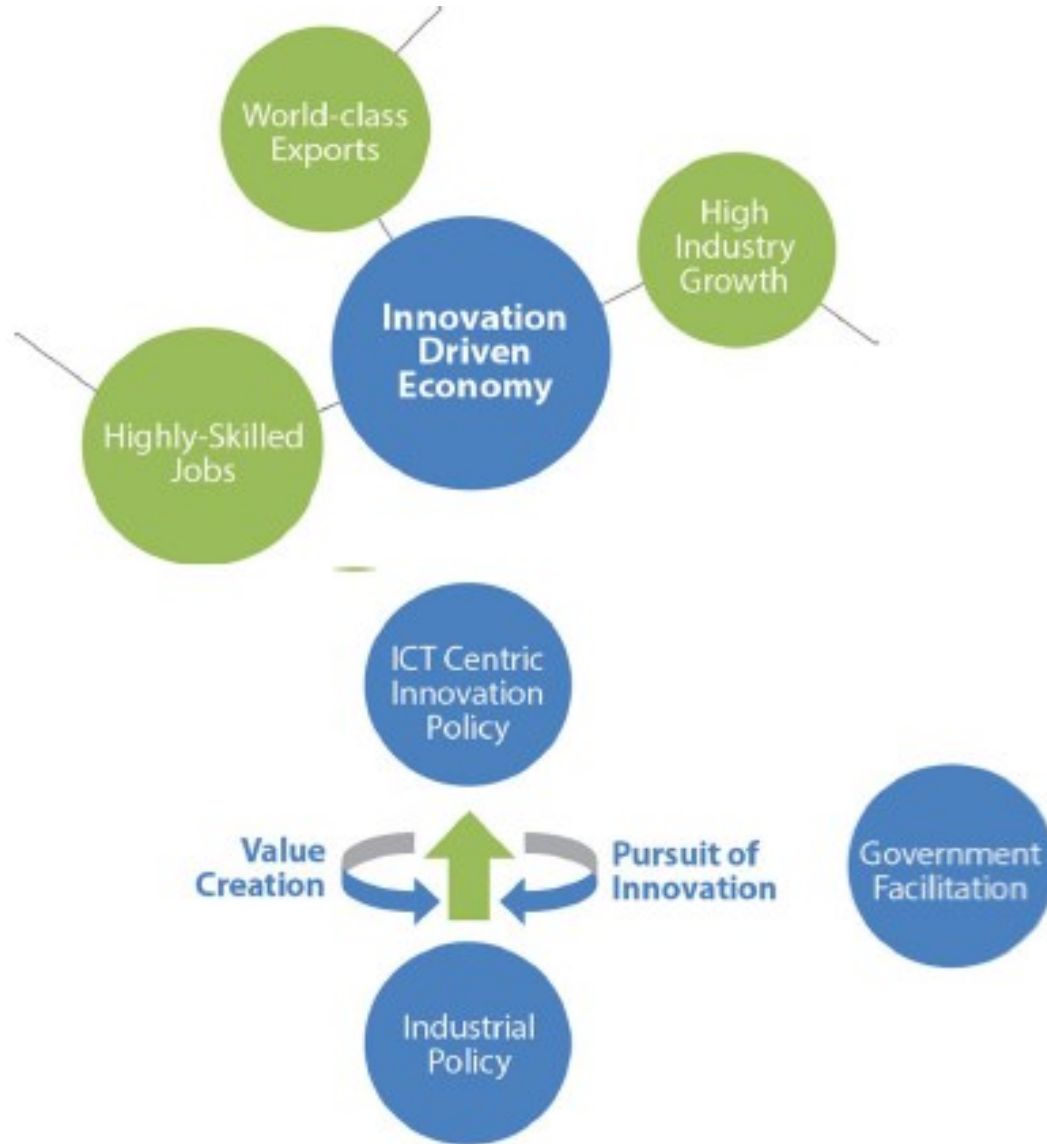
"We need to find the next Google!"

"Government needs to facilitate an institutional framework"





Enabling Environment



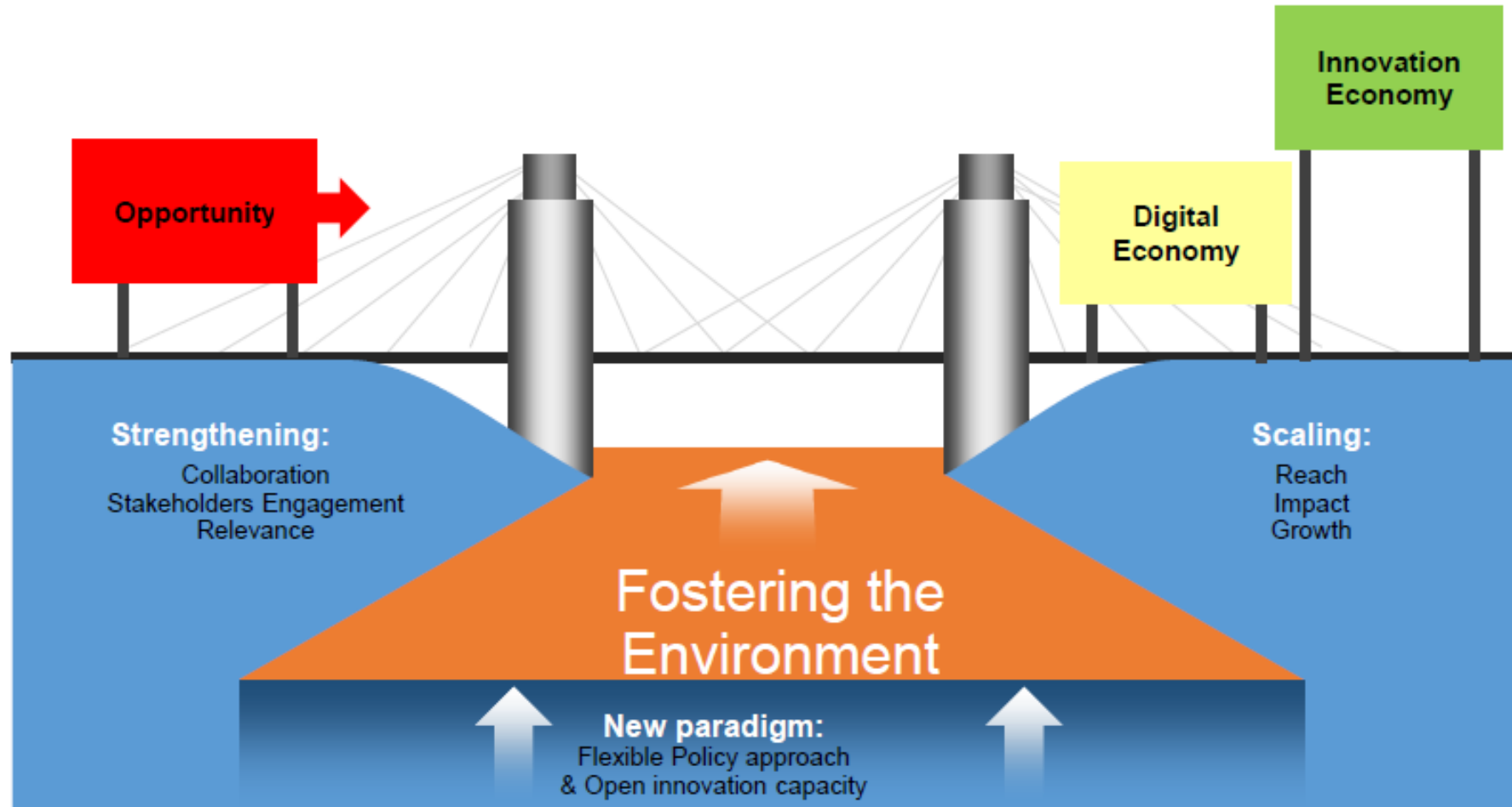


Fostering Innovation



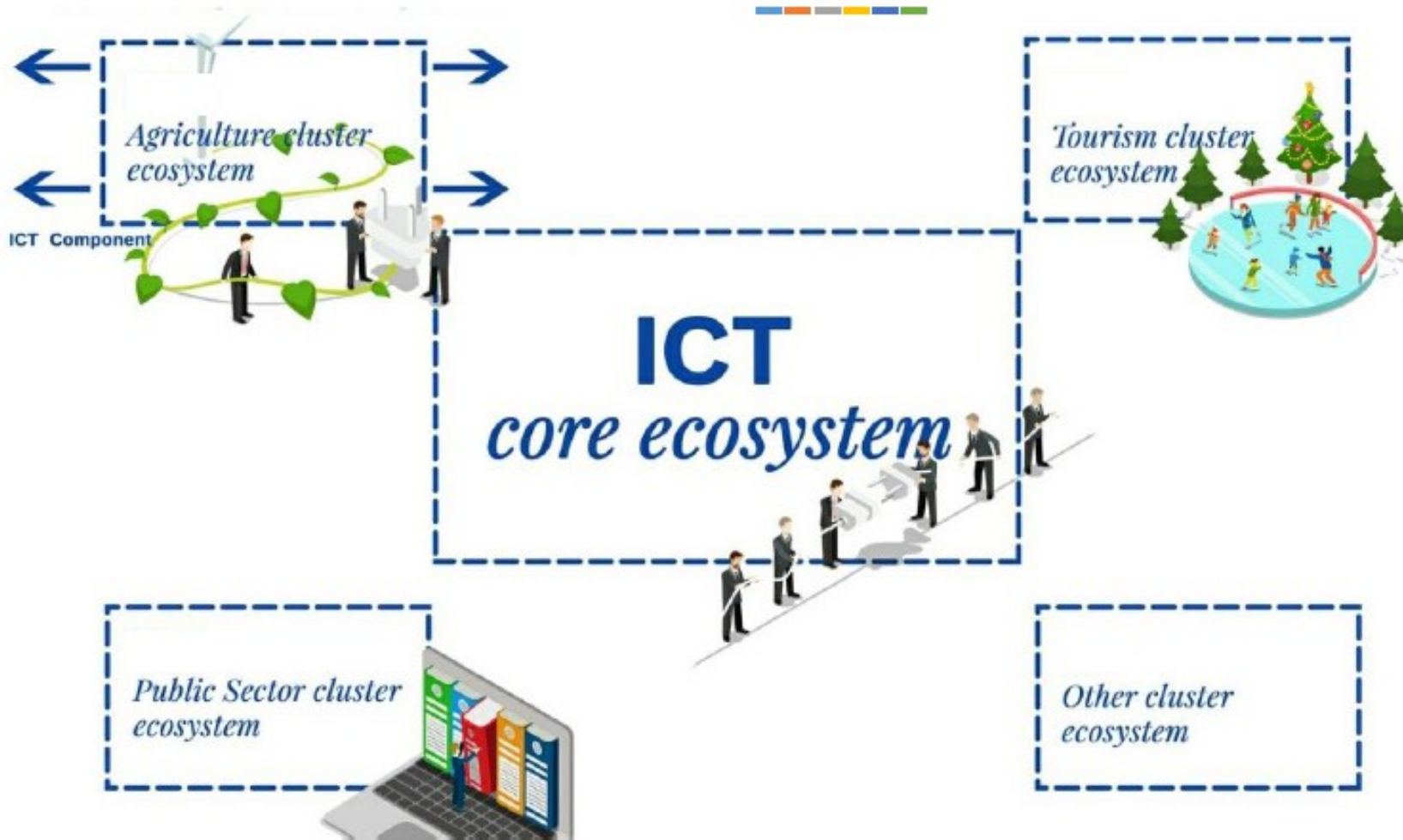


Building Bridges



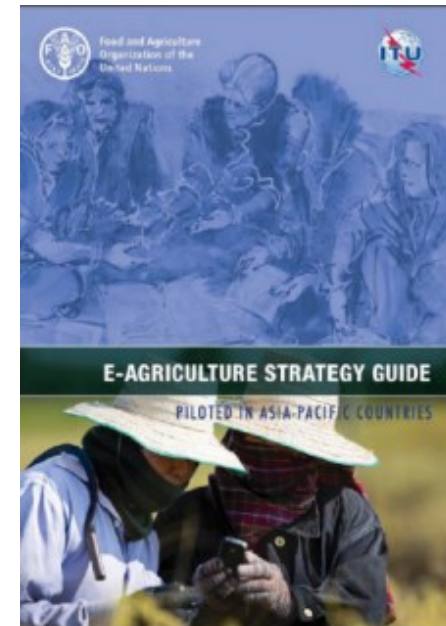


Inclusive Digital Ecosystem





Cross-Sector e-Strategies: Opportunities for Innovation



Implementing e-strategies requires some common requirements e.g. Cloud, Security, Privacy, Sensors, Big Data Analysis, Interoperability, Open Data, Applications Development, Digital Literacy etc.



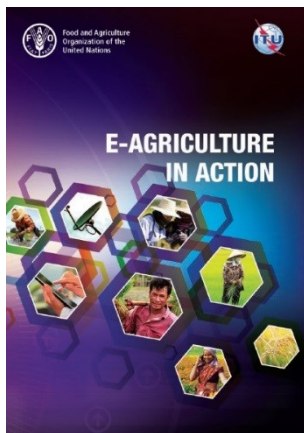


Innovation Opportunities : e Agriculture

- **2015-2016:** Bhutan and Sri Lanka
- **ICT strategy** Lao PDR
- **2016-2017:** Philippines, Papua New Guinea, Fiji and Vanuatu



Food and Agriculture
Organization of the
United Nations



www.fao.org/asiapacific/events/detail-events/en/c/1343/







<http://www.fao.org/3/a-i6733e.pdf>



Innovation Opportunities : e Health



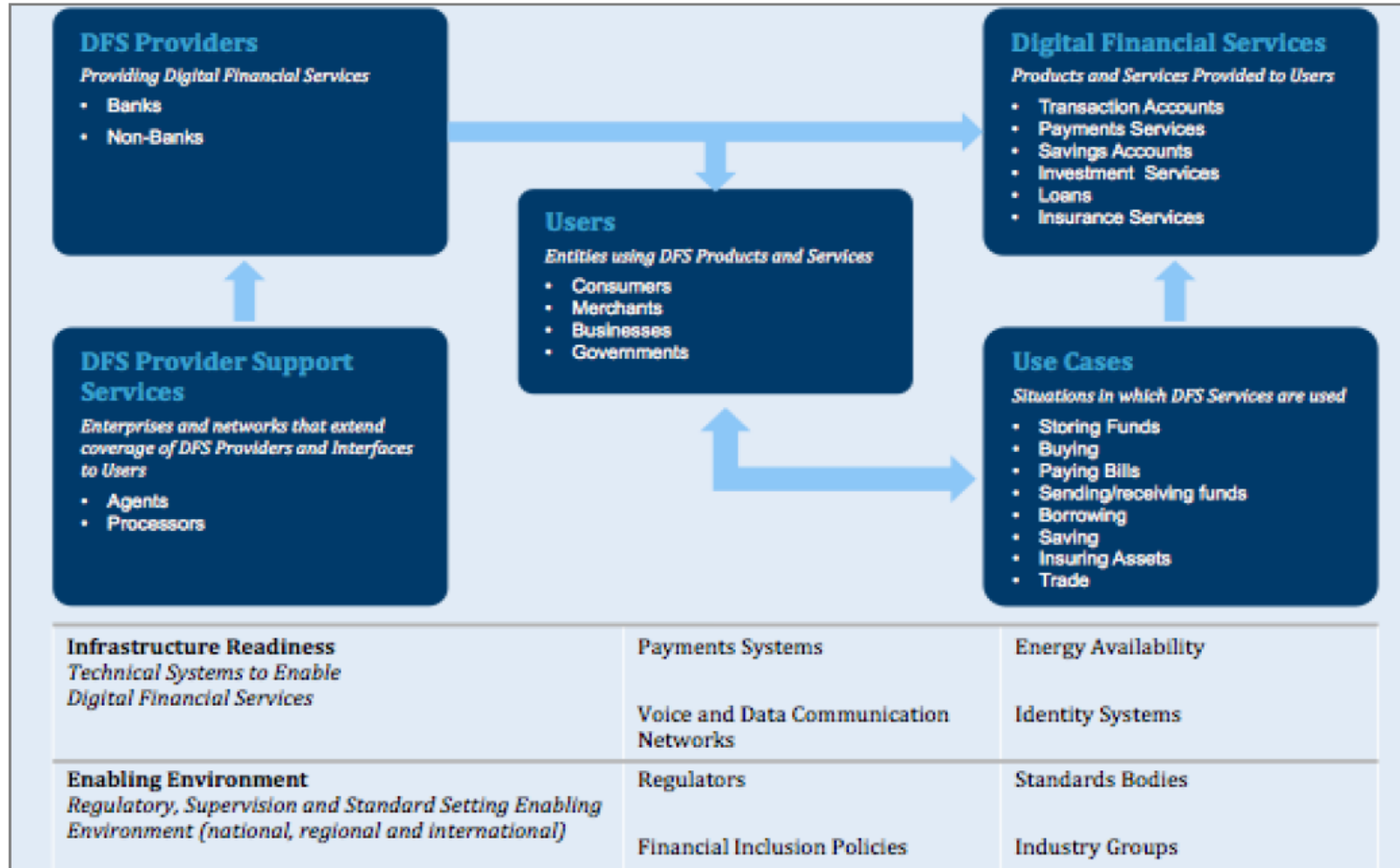
The poster features a large smartphone graphic on the left. The screen displays the text "mHEALTH FOR NON-COMMUNICABLE DISEASES (NCDs) INITIATIVE" at the top, followed by icons for Cancers, Cardiovascular Diseases, Diabetes, and Respiratory Diseases. Below these is the slogan "BE HE@LTHY BE MOBILE" and the tagline "MOBILE TECHNOLOGY FOR A HEALTHY LIFE". At the bottom of the screen is a numeric keypad. To the right of the phone, the text reads "Be He@lthy Be Mobile: Scaling up Digital Health Globally". At the bottom right, it says "A collaborative initiative between" followed by the logos of the World Health Organization and ITU, and the website "www.who.int • mhealth4ncd.itu.int".

-  mDiabetes
-  mCessation
-  mSmartlife
-  mHypertension
-  mCervicalCancer
-  mAgeing
-  mTuberculosis_Tobacco
- 





Innovation Opportunities : Digital Financial Inclusion



ICT Infrastructure

ICT applications and services

Devices



Key Lessons on Innovation

- Leadership: guiding innovation
- Resources: continuum and choice
- Talent: quick wins and structural
- Enabling Environment: specific laws and policies
- Public services and markets: access and growth



I Thank U (ITU)

