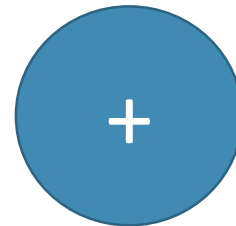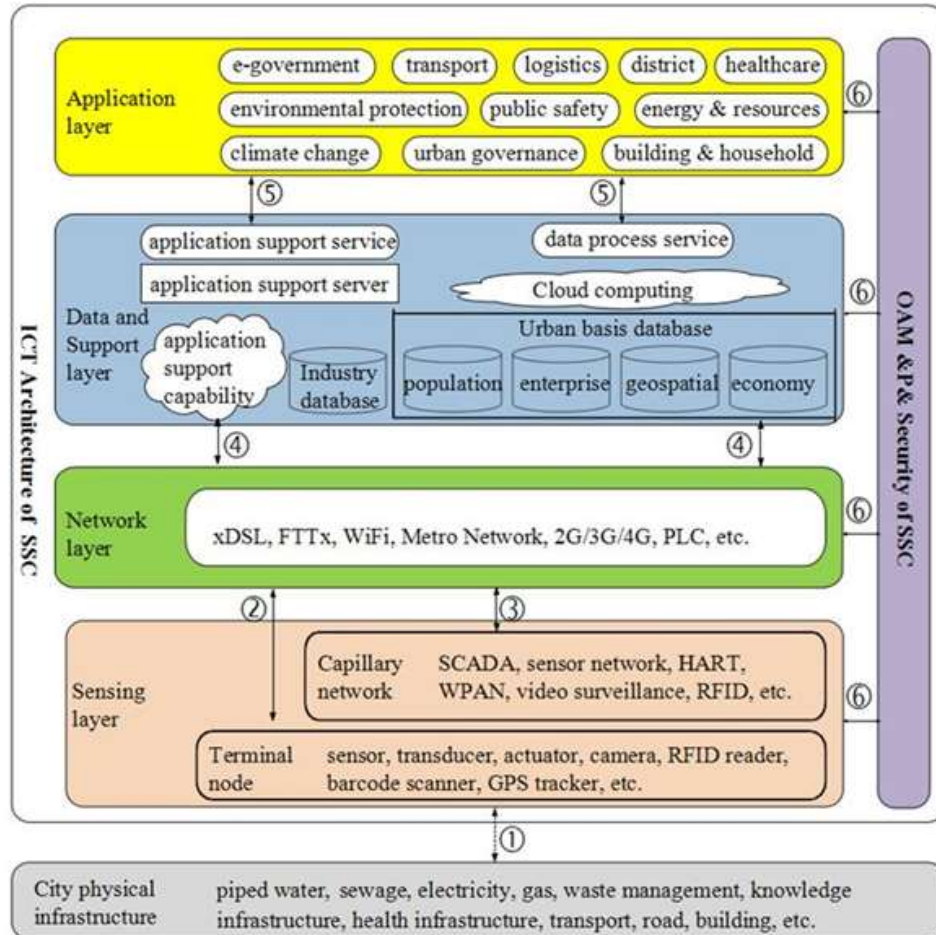# ITU-APT-PITA Sub-regional Workshop on Enabling policies and regulations for Catalyzing e-application in the Pacific
**30 Nov 2018, Apia, Samoa**

# We are sitting on an opportunity curve in this digital society.....



Source: ITU-T Focus Group on Smart Sustainable Cities

# Digital transformation in the Pacific

## SDG DIGITAL INVESTMENT FRAMEWORK

A Whole-of-Government Approach to Investing in Digital Technologies to Achieve the SDGs

September 2018

dial — Digital Impact Alliance

ITU

## SDG Digital Investment Framework Theory of Change

**Results in:**

- Governments optimize reuse across ministries
- Donors better coordinate investments across verticals
- Private sector develops solutions for expanded market

...all directed towards high-impact use cases

| A small set of common ICT Building Blocks | Enable Generic Workflows... | Deliver many high-impact Use Cases... | Contribute across the SDGs |

**THEORY OF CHANGE**

SUSTAINABLE DEVELOPMENT GOALS

**THEORY OF ACTION**

| Define common ICT Building Blocks | Map Generic Workflows... | Model priority Use Cases from each sector | Select SDG Targets and Sectors |

*.. the journey has begun*

# Catalyzing e-applications in the Pacific – Next Step



Source: *Implementing e-application strategy for telecom sector in the Pacific*, 23-24 November 2017 at Nadi, Fiji.

- Policies, regulations, legislations, strategies
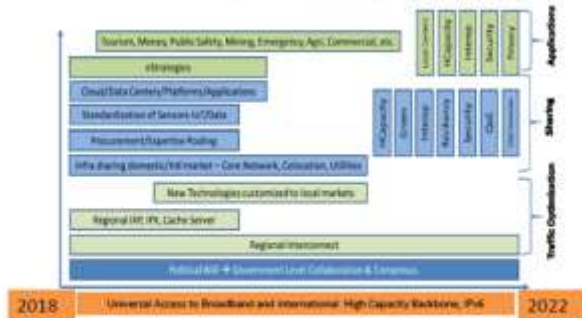- Network planning, traffic engineering
- Commercial agreements
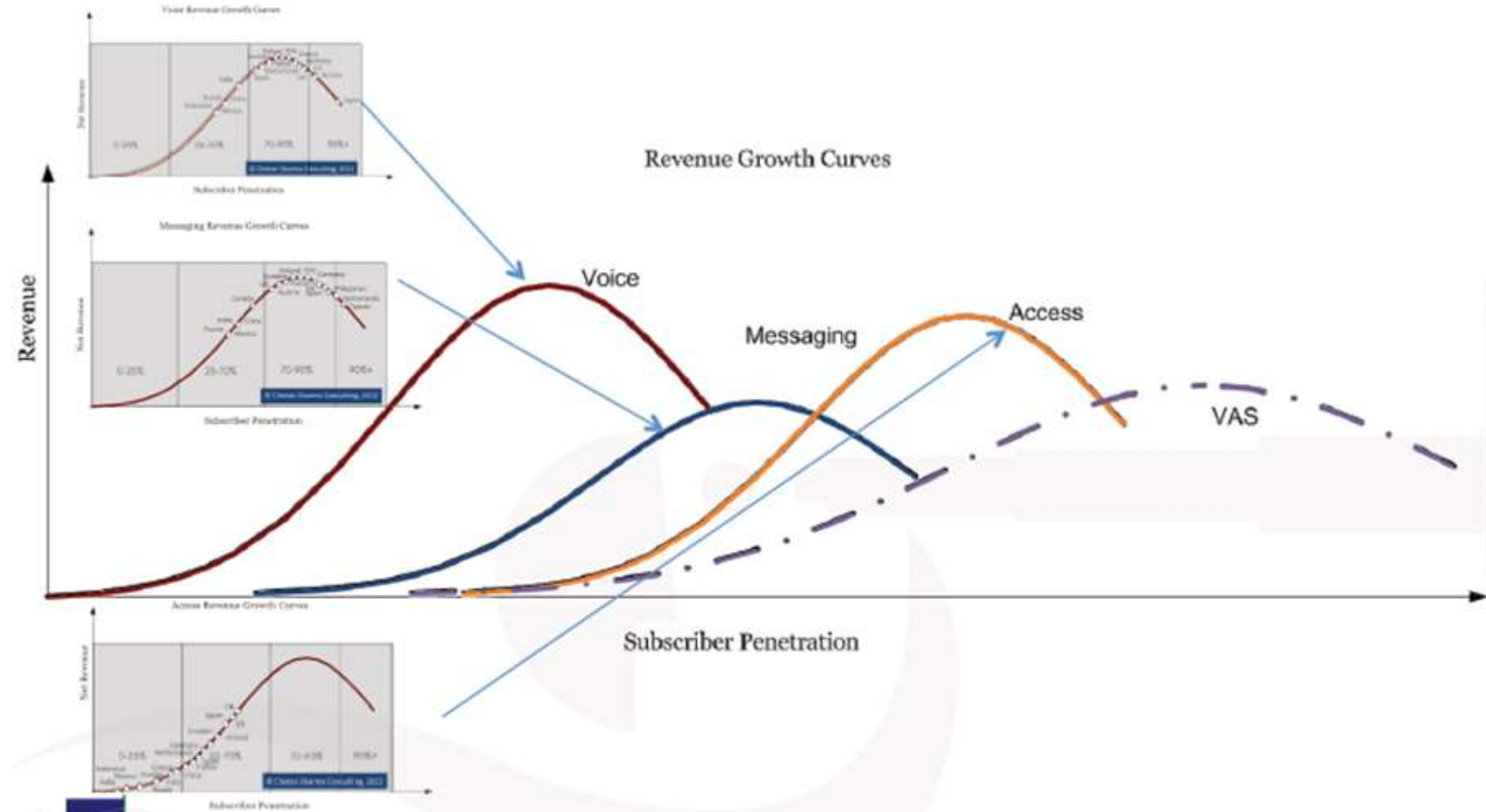- International cooperation
- Capacity building
- Data protection, security

# 4th Wave

# Improved international connectivity will improve network performance and help e-applications scale out in the Pacific
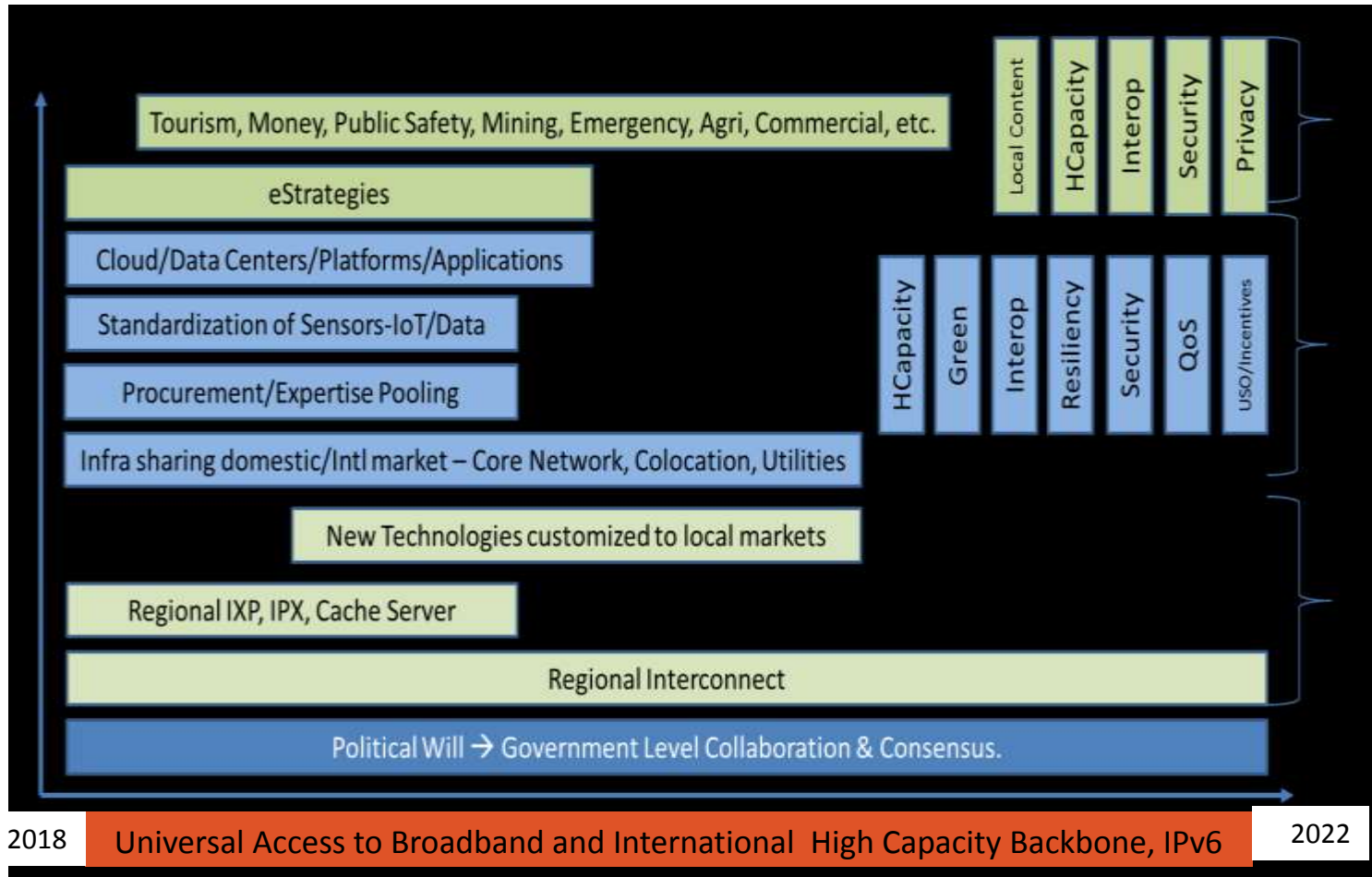


**Fostering applications ecosystem**

**Promoting sharing of resources**

**Optimizing regional traffic**

**Universal access to broadband and international high capacity backbone**

**Collaborative G5 Regulation**

Source: ITU Asia-Pacific CoE training workshop on "**Implementing E-application strategies for telecom sector growth in the Pacific**", revised in 2017 jointly organized with PITA with support from DoCA (Australia) and DoC (Fiji) under COE MDES (Thailand)

# Catalyzing e-applications in the Pacific – Next Step

The basic thesis of the framework is that to scale applications and services in the Pacific, there is a need for countries to share applications across the countries.

With inter islands connectivity and its affordability improving with the advent of submarine cables, the framework can now be realized.

- **Pure commercial services**

- **Commercial services requiring access to public data:**

- **Public services delivery using non-resident applications and platforms**

# Catalyzing e-applications in the Pacific – Next Step

Non-Critical Apps – Entertainment, Precision Agriculture

Critical Apps – Emergency, Public Transport, Banking, Health, G2C

Registration and Traceability

| API Management | Application Support | Sector Specific Components |
| --- | --- | --- |

| Application Hosting | Messaging/Notification | Billing |
| --- | --- | --- |

| Data Hosting and Management | Data Analytics and Intelligence |
| --- | --- |

| Authentication and Authorization | Identity Management | Security |
| --- | --- | --- |

| Data Classification | Data Governance Principles |
| --- | --- |

Policy, Strategy, Legal, Regulatory Framework Guidance

Confidence Building Framework

**Infrastructure**

Interop of Data

Interop of Services

Governmental Policy & Regulatory Collaboration

| Operator Roadmap | Cross-Operator Collaboration Required |
| --- | --- |

| Govt Roadmap | Requires Regional Collaboration |
| --- | --- |

# Policy and regulatory issues in digital applications (sample)



| Regulatory approaches | Ex-ante issues (ICT sector) | Ex-post (ICT and general competition) | Cross-agency regulatory areas |
|---|---|---|---|
| **Digital applications and services policy and regulatory issues** | • Licensing<br>• Infrastructure and network<br>• Price control<br>• Transparency<br>• Non-discrimination<br>• Accounting separation<br>• Quality of Service<br>• Interconnection<br>• Interoperability<br>• Net Neutrality<br>• Emergency Services<br>• Interception<br>• USO<br>• Security<br>• Consumer protection | • Mergers and Acquisitions control<br>• Transparency<br>• Abuse of dominance investigation<br>• Other anti-competitive practices (collusion) | • Data privacy<br>• Cross-border data protection<br>• Content regulation<br>• Taxation<br>• Cross-sectoral regulations (e.g. transport, agriculture, health, finance)<br>• Consumer protection (cross-sectoral) |
| **Policy and regulatory agencies** | Telecom and Broadcasting regulators (lead) and Competition regulators | General Competition (lead), Telecom, Broadcasting regulator and policy maker | Telecom, Sectoral policy makers and regulators, content regulators, e-Government agencies, Law enforcement and security agencies, copyright agencies, others |

Source: ITU

*enabling environment for digital
transformation journey in the Pacific ..........*

# ITU-WHO : ICTs for better health outcomes : e Health (SDG 3)



Be He@lthy Be Mobile: Scaling up Digital Health Globally

# ITU-ILO : Digital Skills for Decent Jobs for Youth Campaign to train 5 million youth with job-ready digital skills

**Digital Skills Toolkit**

ILO and ITU are leading the Digital Skills for Decent Jobs Campaign as part of the Global Initiative on Decent Jobs for Youth in order to foster decent and inclusive employment and entrepreneurship opportunities in line with the Sustainable Development Goals.

Advanced digital skills: related to technology development such as coding, software and app development, network management, machine learning, big data analysis, IoT, cybersecurity or blockchain technology;
Basic digital skills: related to the effective use of technology, necessary in most professions. They include web research, online communication, use of professional online platforms and digital financial services;
Soft skills: skills necessary to all professionals to ensure collaborative and effective work in the digital economy. They include leadership, communication and teamwork skills, client-orientation, among others.
Digital entrepreneurship: digital skills required by entrepreneurs, including online market research, strategic planning and business analysis, using financing and crowdfunding platforms, online marketing, and online networking and establishing mentoring relationships
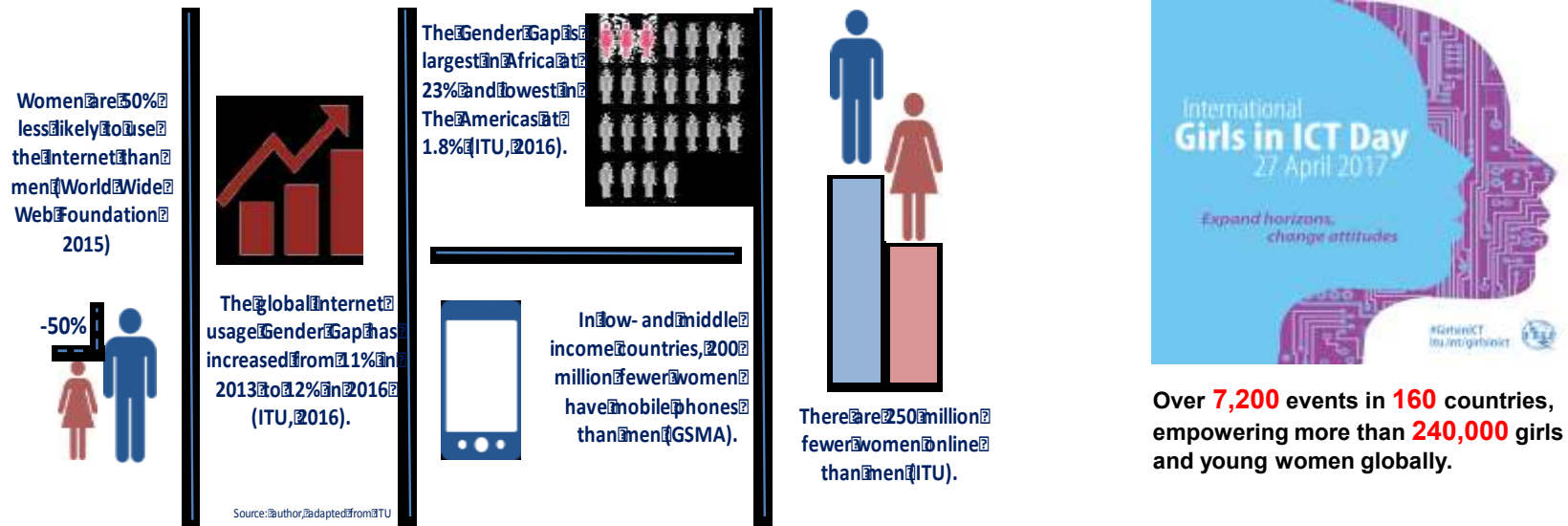
Ministers of ICT, Labour and Education, national governments, the private sector, training providers, Academia, NGOs, other members of the UN family as well as other interested parties are actively encouraged to participate

# SDG5 Gender Equality

- Gender gap in mobile phone ownership and use is higher in lower-income and less connected countries

**Women are 50% less likely to use the Internet than men (World Wide Web Foundation 2015)**

-50%

**The global Internet usage Gender Gap has increased from 11% in 2013 to 12% in 2016 (ITU, 2016).**

Source: author, adapted from ITU

**The Gender Gap is largest in Africa at 23% and lowest in The Americas at 1.8% (ITU, 2016).**

**In low- and middle income countries, 200 million fewer women have mobile phones than men (GSMA).**

**There are 250 million fewer women online than men (ITU).**

International **Girls in ICT Day** 27 April 2017

*Expand horizons, change attitudes*

#GirlsinICT itu.int/girlsinict

**Over 7,200 events in 160 countries, empowering more than 240,000 girls and young women globally.**

Source: Discussion paper for Davos, Connecting the Unconnected – Working together to achieve Connect 2020 Agenda Targets  ITU data

fast forward together #ICT4SDG

MDES (Thailand) and ITU in partnership with FAO and CISCO trained more than 200 girls in Thailand on digital skills

**2018**

Launched by ITU and MDES (Thailand) in 2017 with partners (FAO, CISCO, Microsoft)

**Key objective:** Enhance employment opportunities for girls and young women in Thailand by imparting employable digital skills relevant for the local job market

2017 – 2018 (Aug)
- Around 300 girls trained
- 6 trainings held
- Next training planned in 2018
- More partners have joined

# ITU-UN WOMEN : Global Partnership for Gender Equality in the Digital Age



- The Global Partnership for Gender Equality in the Digital Age (the Partnership) is a multi-stakeholder initiative implemented by ITU and UN Women to promote awareness; build political commitment, leveraging knowledge, efforts, and resources for the greatest possible impact to achieve digital gender equality at both the global and national levels. It aims at creating an unstoppable global movement where women and girls are equal participants in the technology revolution.

- Through gathering of data, sharing of knowledge, and direct action, the Partnership will focus on addressing Sustainable Development Goal 5b, "Enhance the use of enabling technology, in particular information and communications technology (ICTs), to promote the empowerment of women" through three areas of action:

  - ACCESS – Achieve equal access to digital technologies;
  - SKILLS – Empower women and girls with skills to become ICT creators;
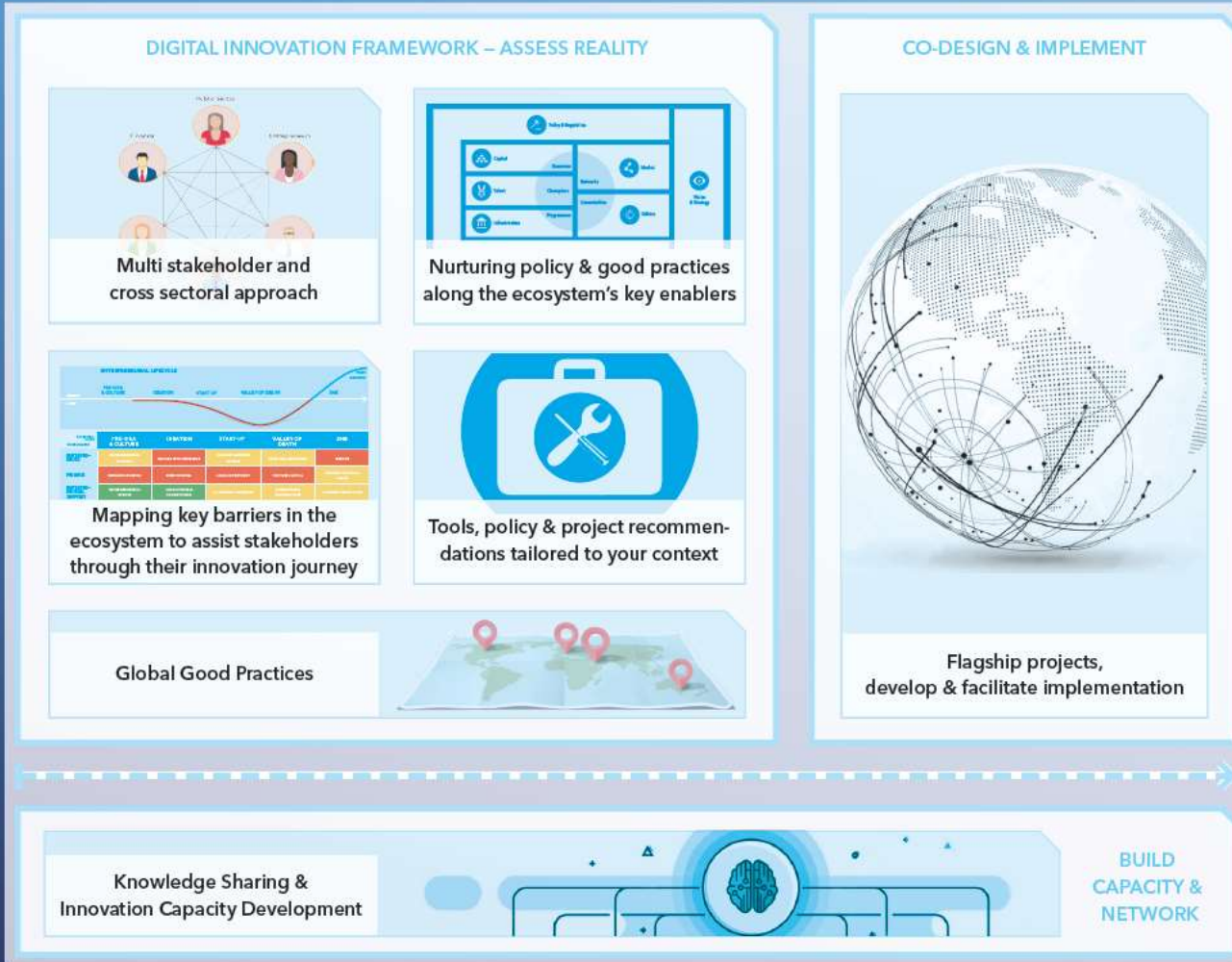  - LEADERS – Promote women as ICT leaders and entrepreneurs.

In the perspective of the promotion of The Global Partnership for Gender Equality in the Digital Age, ITU and UN Women launched in September 2016 the EQUALS campaign to promote together Gender Equality in the Digital Age. This campaign works closely to the achievement of Goal 5 of the Sustainable Development Agenda, 'Achieve gender equality and empower all women and girls'.

# DIGITAL INNOVATION FRAMEWORK
# AND COMPREHENSIVE APPROACH OF THE ITU INNOVATION PLATFORM

## DIGITAL INNOVATION FRAMEWORK – ASSESS REALITY

**Multi stakeholder and cross sectoral approach**

**Nurturing policy & good practices along the ecosystem's key enablers**

**Mapping key barriers in the ecosystem to assist stakeholders through their innovation journey**

**Tools, policy & project recommendations tailored to your context**

**Global Good Practices**

## CO-DESIGN & IMPLEMENT

**Flagship projects, develop & facilitate implementation**

**Knowledge Sharing & Innovation Capacity Development**

**BUILD CAPACITY & NETWORK**

'HOW DO WE GET STARTED, AND HOW DO WE KNOW WE ARE HEADING IN THE RIGHT DIRECTION?'

These are the questions ITU Members often ask as they embark on a programme to transform their ICT infrastructure into the innovative powerhouse it could be and indeed should be – one that will drive outstanding economic growth and place them squarely at the centre of the 21st century digital opportunity. While the questions can appear daunting, there is a solution – and a step-by-step process that leads the way.

**ITU Innovation Platform**

Through its range of powerful products, services and tools that make up the ITU Innovation Platform, ITU supports its members in fostering vibrant innovation ecosystems and in accelerating digital transformation for sustainable growth in the digital economy. The goal is to place ICT innovation front and centre in a country's national development planning.

The ITU Innovation Platform offers four powerful elements:

- **Digital Innovation Framework**: a scalable approach mapping enablers and blockers in potentially vibrant ICT centric ecosystems and assessing a country's capabilities in progressing towards an accelerated digital transformation.

- **Country assessments**: powerful and high-value analyses of a country's digital ecosystems and its potential for digital transformation – such as country reviews, digital innovation profiles, and more.

- Co-development of **country level bankable projects**.

- **Knowledge sharing and capacity building**: including dialogues on innovation at regional and global level – and scaling of work through national and regional capacity building.
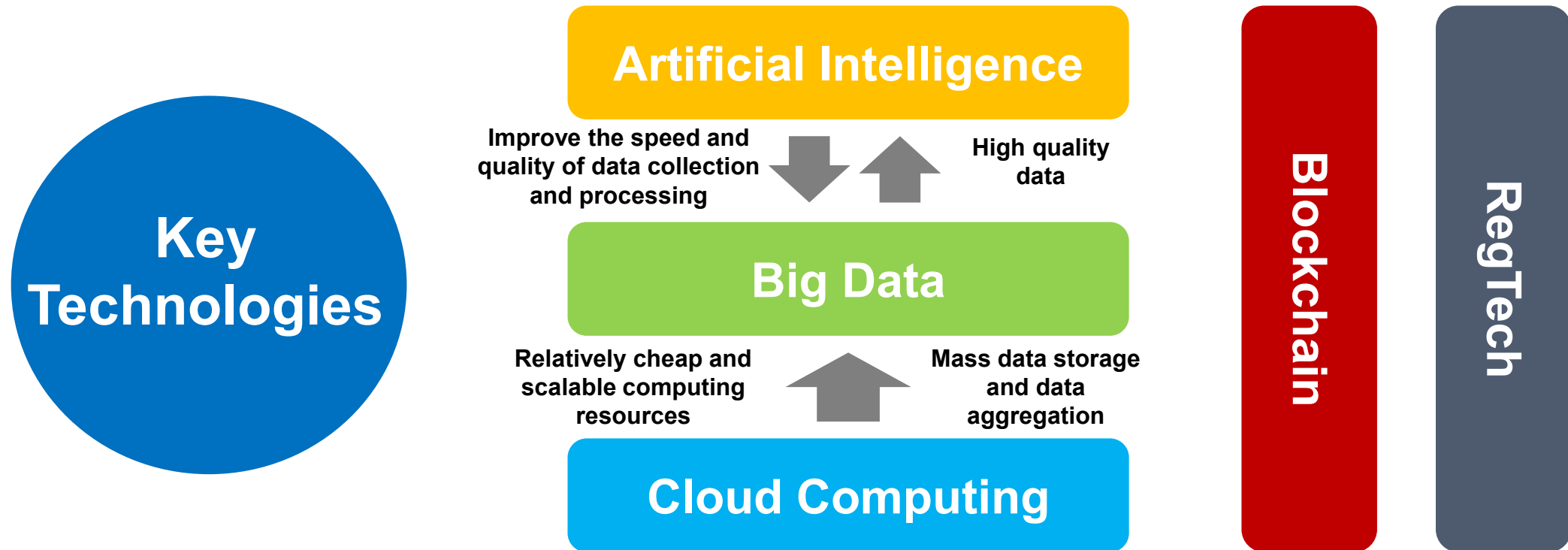
# Cloud computing, Big data, AI and Blockchain are the key technologies of FinTech

The development and application of emerging technologies such as cloud computing, big data, artificial intelligence, and blockchain have had a major impact on the business service model of financial institutions. They have gradually become the key technology driver for the development of the financial industry.

**Key Technologies**

**Artificial Intelligence**

Improve the speed and quality of data collection and processing

High quality data

**Big Data**

Relatively cheap and scalable computing resources

Mass data storage and data aggregation

**Cloud Computing**

**Blockchain**

**RegTech**

Source: Dr. Han Han, Senior Engineer, China Academy of ICT

**Soft- Infrastructure**
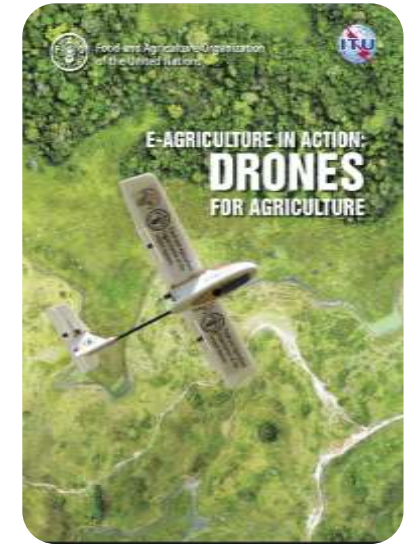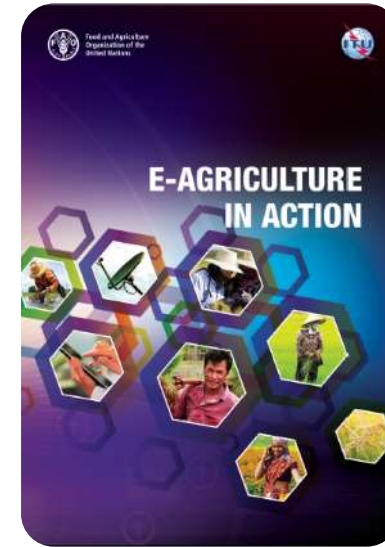**ICT for Better Health Outcomes**

**ITU-WHO Partnership**

BE
HE@LTHY
BE
MOBILE

MOBILE TECHNOLOGY FOR A HEALTHY LIFE

**e.g. in ASP Philippines, India**
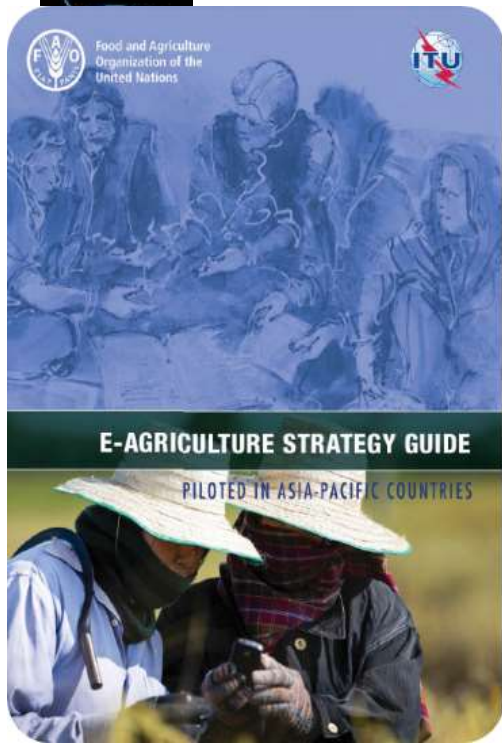
**Country Assistances**

**Afghanistan**
**Bhutan**
**Fiji**
**Papua New Guinea**
**Philippines**
**Sri Lanka**

**Case studies**

E-AGRICULTURE IN ACTION

E-AGRICULTURE IN ACTION: DRONES FOR AGRICULTURE

*Coming up: Special edition on Blockchain*

**Strategy Guide**

E-AGRICULTURE STRATEGY GUIDE

PILOTED IN ASIA-PACIFIC COUNTRIES

**Solutions Forum**

e agriculture SOLUTIONS FORUM 2016

e agriculture SOLUTIONS FORUM 2018

Food and Agriculture Organization of the United Nations

ITU

**E-agriculture – Asia-Pacific**

# United 4 Smart Sustainable Cities (U4SSC)

**U4SSC is a United Nations Initiative coordinated by ITU and UNECE** that advocates for public policy to encourage the use of ICTs to facilitate and ease the transition to smart sustainable cities.

U4SSC was launched by **ITU and UNECE** to respond to the **Sustainable Development Goal 11: "Make cities and human settlements inclusive, safe, resilient and sustainable**

**Supported by:**

Convention on Biological Diversity

ECLAC

FAO

ITU

United Nations Economic Commission for Africa

UNDP

UNECE

UNESCO Montevideo Office Regional Bureau for Sciences in Latin America and the Caribbean

United Nations Educational, Scientific and Cultural Organization

UN environment United Nations Environment Programme

UNEP FINANCE INITIATIVE

UN HABITAT FOR A BETTER URBAN FUTURE

UNIDO

UNITED NATIONS UNIVERSITY UNU-EGOV Operating Unit on Policy-Driven Electronic Governance

UN WOMEN

World Meteorological Organisation

# Digital Financial Services – Asia-Pacific

## Mongolia (2017)
**Digital Financial Services (DFS) and Digital Financial Inclusion (DFI) Ecosystem in Mongolia: A study with focus on cross-sectoral policy and regulatory collaboration**

## China (2018-2020)
**Cooperation with World Bank as well as Bill & Melinda Gates Foundation as part of FIGI project**

## India (2018)
**Capacity building on Understanding Digital Payments**

## Thailand (2018)
**Regional training on Distributed Ledger Technologies**

**Ongoing discussions during various regional forums, e.g. ITU Regional Development Forum 2018 (Bangkok)- Thank UNCDF to share experience in 2018**

Best Practice Guidelines on Collaborative Regulation for Digital Financial Inclusion (2016)

Focus Group Digital Financial Services (FG DFS) (2014-2016)

Focus Group on Digital Currency including Digital Fiat Currency (FG DFC)

Focus Group on Application of Distributed Ledger Technology (FG DLT)

FIGI Project (ITU, World Bank, Bill & Melinda Gates Foundation)

# U4SSC publications



Available for free on the U4SSC website:
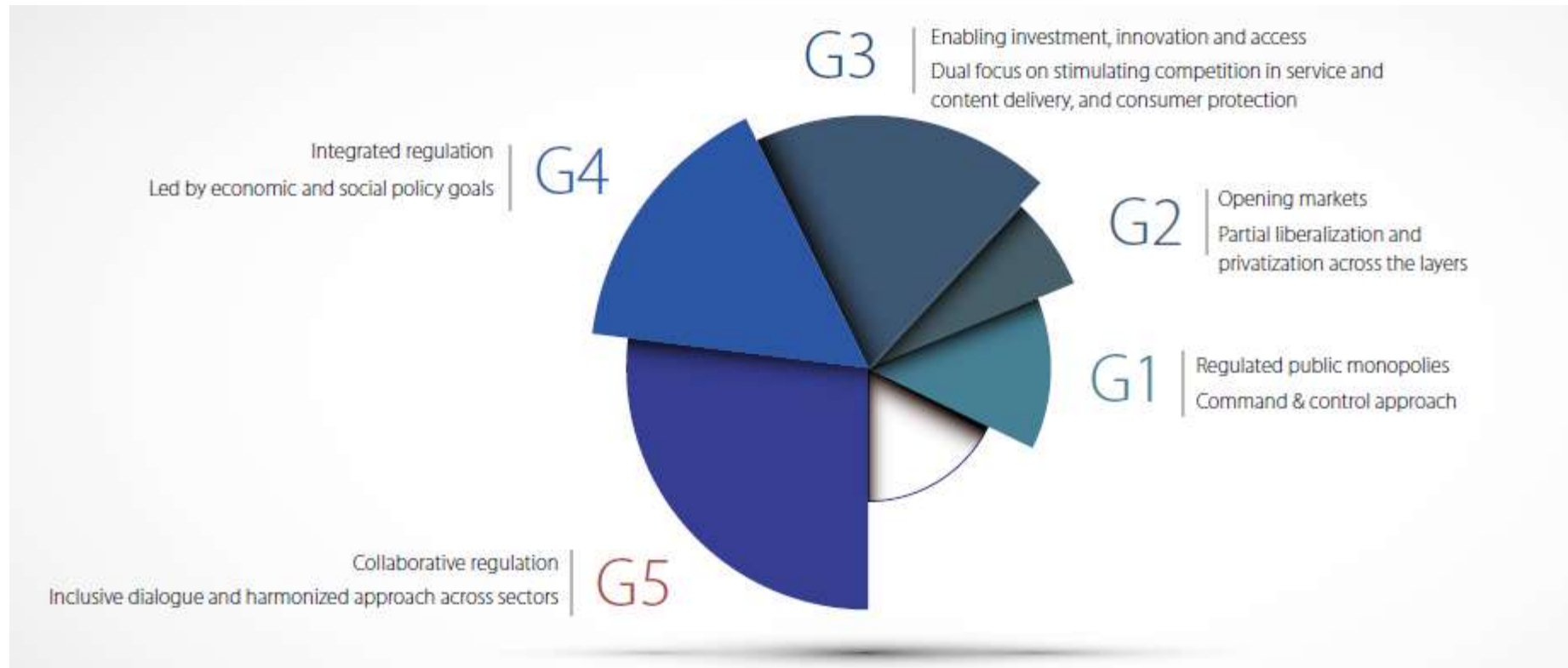http://itu.int/go/U4SSC

# Implementing Key performance indicators for Smart Sustainable Cities Worldwide



The U4SSC welcome all cities that would like to start their SSC journey!

**For more information contact**: u4ssc@itu.int

# Evolution of ICT Regulation



Source: ITU