ACHIEVING SDGS THROUGH DIGITAL TRANSFORMATION IN DIGITAL ECONOMY & BUILDING DIGITAL SKILLS

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Tehran, I R Iran

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 together
#ICT4SDG

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

Specifically referenced in the SDG targets:

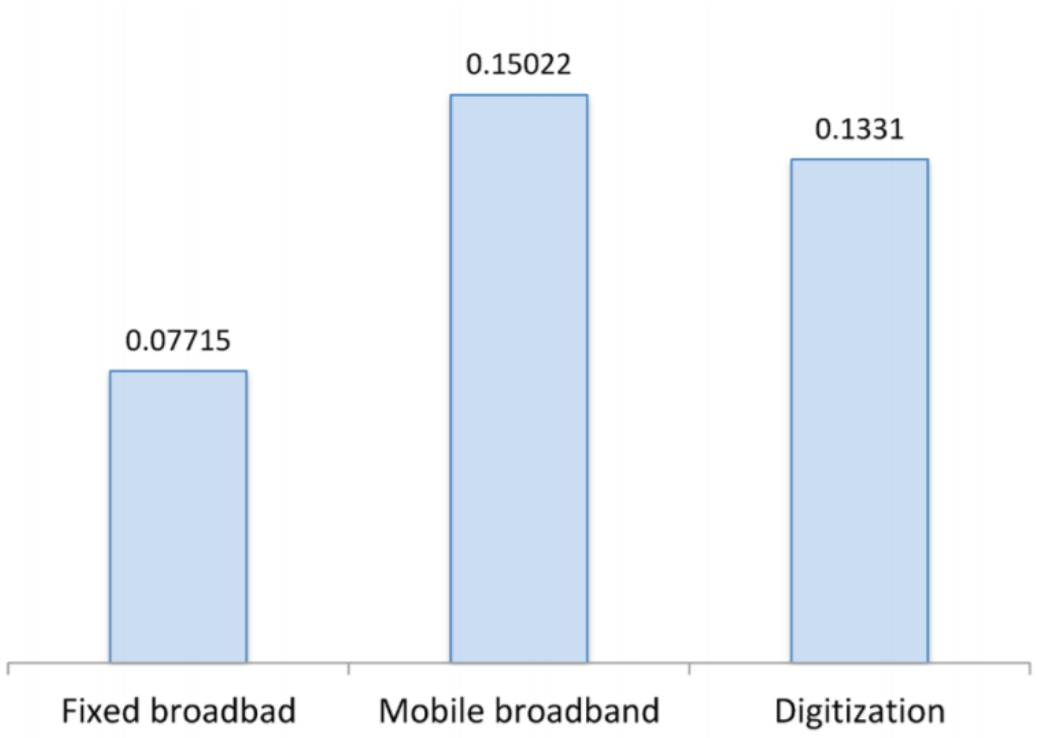
- SDG4 Quality Education (4b)
- SDG5 Gender Equality (5b)
- SDG9 Industry, innovation and Infrastructure (9c)
- SDG 17 Partnerships for the Goals (17.8, as a means of implementation)

Broadband Commission for SDG 2025 Targets

1. By 2025, all countries should have a funded national broadband plan or strategy, or include broadband in their universal access and services definition.
2. By 2025, entry-level broadband services should be made affordable in developing countries, at less than 2% of monthly gross national income per capita.
3. By 2025 broadband-Internet user penetration should reach:
   a) 75% worldwide
   b) 65% in developing countries
   c) 35% in LDCs
4. By 2025, 60% of youth and adults should have achieved at least a minimum level of proficiency in sustainable digital skills.
5. By 2025, 40% of the world's population should be using digital financial services.
6. By 2025, un-connectedness of Micro-, Small- and Medium-sized Enterprises should be reduced by 50%, by sector.
7. By 2025, gender equality should be achieved across all targets

Impact on GDP of 1 per cent increase in independent variable (2004-2015)

Impact on GDP of 1% increase in independent variable (2004-2015)



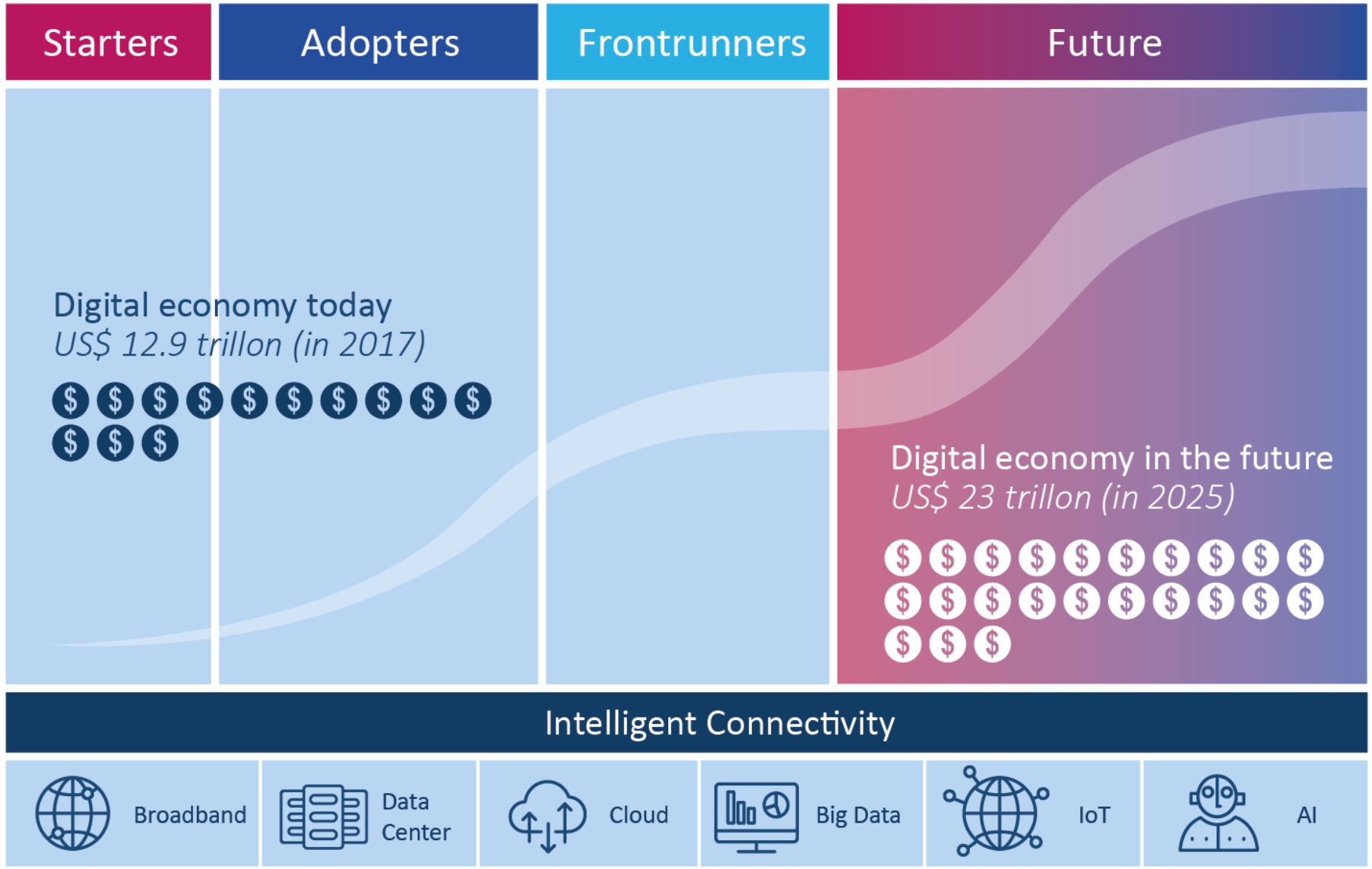
The study also shows that the economic impact of digitization is higher than the one from fixed broadband and similar to mobile broadband and also higher on more advanced countries. It also recognizes that the digital ecosystem has an economic impact on productivity.

Source: ITU

Intelligent Connectivity – The USD 23 Trillion Opportunity by 2025

ICT infrastructure maturity and GDP growth, the 2018 Global Connectivity Index (GCI)

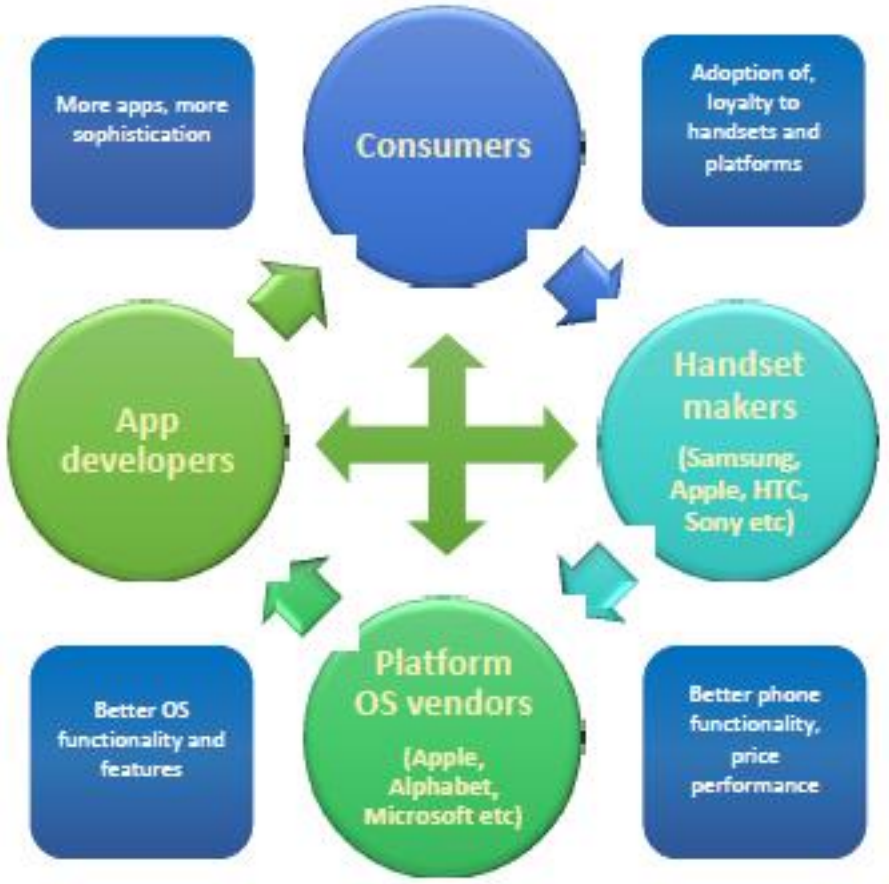
GDP returns among countries with concentrated adoption of ICT infrastructure. Countries with less proactive investment have seen less stellar results.



Source: *Huawei.*

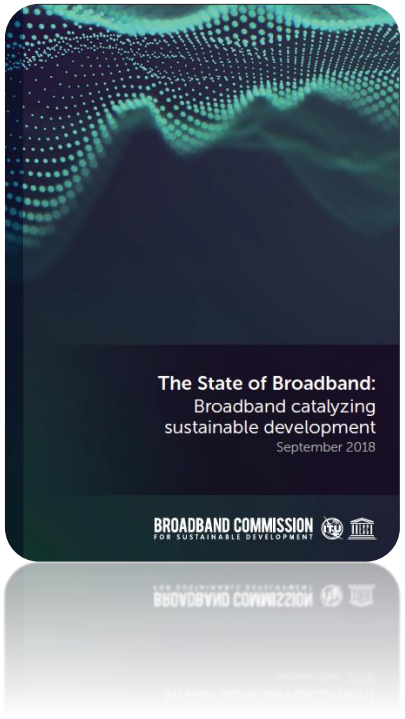
The APP Economy Ecosystem

- The app economy ecosystem is an interacting set of handset makers, platform owners, app developers and consumers in a highly competitive and dynamic technological environment
- It is characterised by interacting sets of network effects:
  - More consumers per platform, the more profitable will be app development for that platform
  - More apps and better apps will attract more consumers
  - Handset manufacturers achieving greater scale will lower unit costs, fine tune production value chains, enabling more competitive handset market
  - Better handsets mean more consumers and so on...



Source: ***The Race for Scale: Market Power, Regulation, and the App Economy, GSR 2016***

Estimates of the Global Market: 2015, 2016, 2017, 2020 and 2021



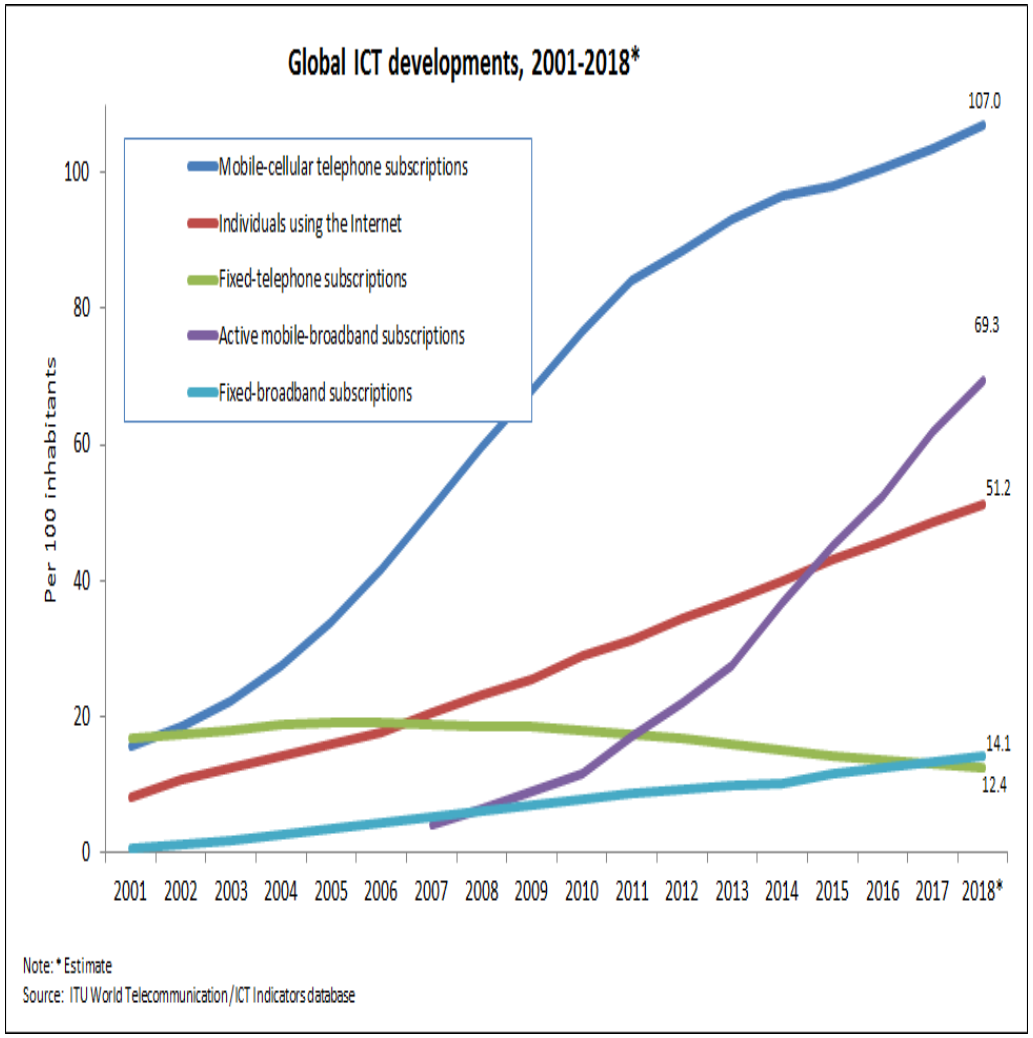
	2015	2016	2017	2020	2021
Mobile cellular subscriptions	7.2 bn (ITU) 7.2 bn (GSMA) 7.2 bn (E)	7.4 bn (ITU) 7.5 bn (GSMA) 7.5 bn (E)	7.74 bn (ITU) 7.8 bn (E)	8.3 bn (GSMA) 8.4 bn (E)	8.4 bn (GSMA) 8.6 bn (E)
Unique mobile phone users	4.6 bn (GSMA) 5.0 bn (E)	4.8 bn (GSMA) 5.1 bn (E)	5 bn (GSMA) 5.3 bn (E)	5.4 bn (GSMA) 5.7 bn (E) 5.4 bn (Cisco)[3]	5.5 bn (GSMA) 5.8 bn (E)
LTE subscriptions	1.1 bn (GSMA) 1.1 bn (E) 1.37 bn (ABI Research)[4] 1.068 bn (GSA)	1.8 bn (GSMA) 1.9 bn (E*) 2 bn (Strategy Analytics[5])	2.6 billion (GSMA) 2.8 bn (E*)	4.1 bn (GSMA) 3.5 bn (ABI) 4.8 bn (E) 3.6 bn (4G Am)	4.5 bn (GSMA) 5.3 bn (E)
5G subscriptions	-/-	-/-	-/-	70 m (GSMA) 55 million (E)	220 m (GSMA) 190 million (E)
Mobile broadband subscriptions	3.2 bn (ITU) 3.4 bn (GSMA) 3.6 bn (E)	3.65 bn (ITU); 4.1 bn (GSMA) 4.5 bn (E)	4.2 bn (ITU) 4.8 bn (GSMA) 5.3 bn (E*)	6.5 bn (GSMA) 7.0 bn (E)	6.9 bn (GSMA) 7.5 bn (E)
Smartphone subscriptions	3.3 bn (GSMA) 3.3 bn (E)	3.9 bn (GSMA) 3.8 bn (E)	4.5 bn (GSMA) 4.4 bn (E*)	5.9 bn (GSMA) 5.8 bn (E)	6.2 bn (GSMA) 6.3 bn (E*)
Fixed broadband (ITU)	820m (ITU)	884m (ITU)	979m (ITU) 1bn (E*)	1.1 bn (E*)	1.2 bn (E*)
Internet users (ITU)	3.21 bn (ITU)	3.49 bn (ITU)	3.58 bn (ITU)	4.16 bn (ITU)	-/-
Facebook users	1.59 bn MAU 1.04 bn DAU[6] (Dec 2015)	1.71 bn MAU 1.13 bn DAU	2.13 bn MAU 1.4 bn DAU	-/-	-/-
LINE users	215 million	217 million	207 million	203 million	-/-
Sina Weibo users	222 million	313 million	392 million	411 million	-/-
Vkontakte users	66.5 million	77.8 million	81.1 million	97 million	-/-
WeChat users	600 million*	806 million	963 million	1 billion	-/-
Smartphone stock	2.2 bn (Del)	-/-	-/-	2.1 bn (BI)[7]	-/

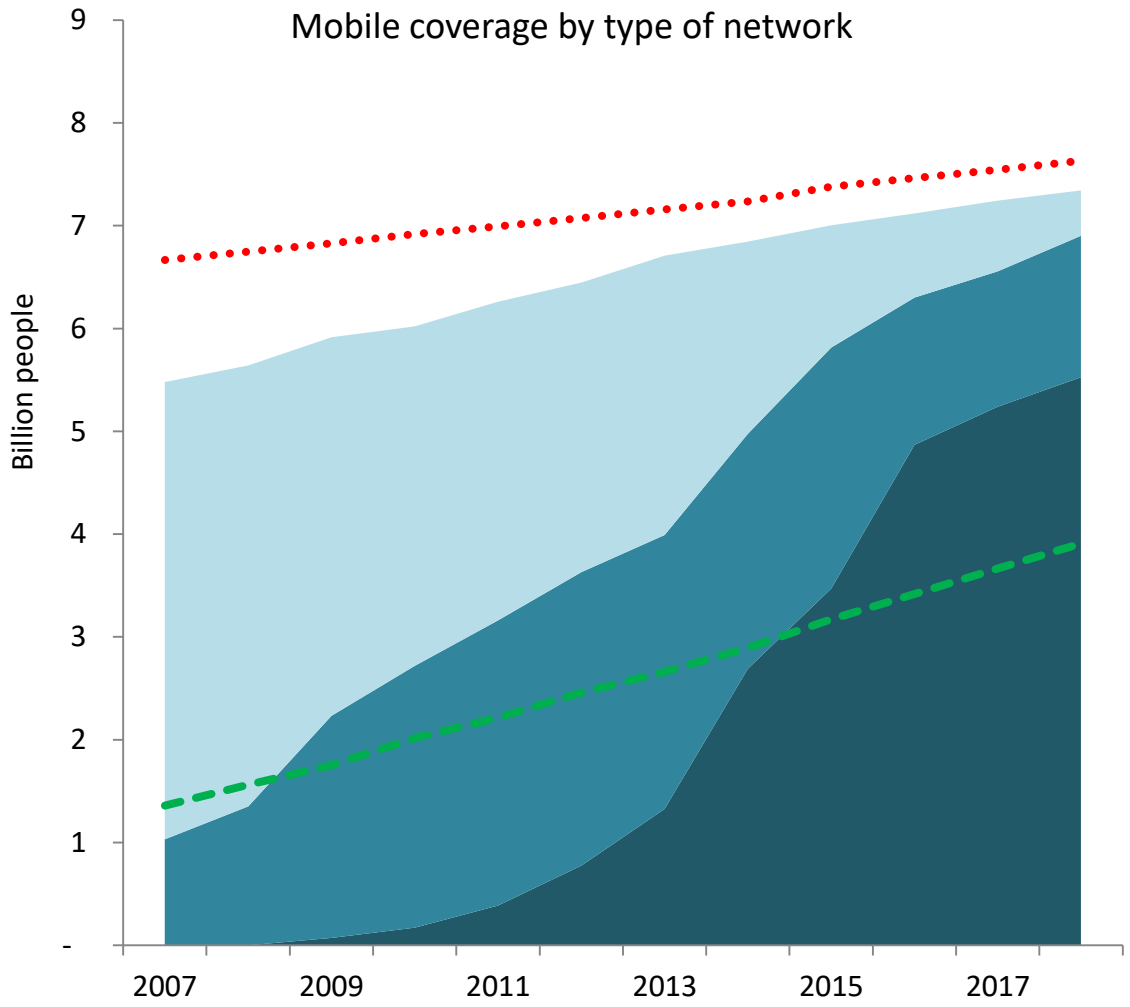
Source: Various. EST = Estimate. BI= Business Intelligence; Del = Deloitte; Facebook, E = Ericsson Mobility Report June 2018 at: https://www.ericsson.com/assets/local/mobility-report/documents/2018/ericsson-mobility-report-june-2018.pdf GSMA = GSMA database.

MAU = monthly active users; DAU = daily active users.

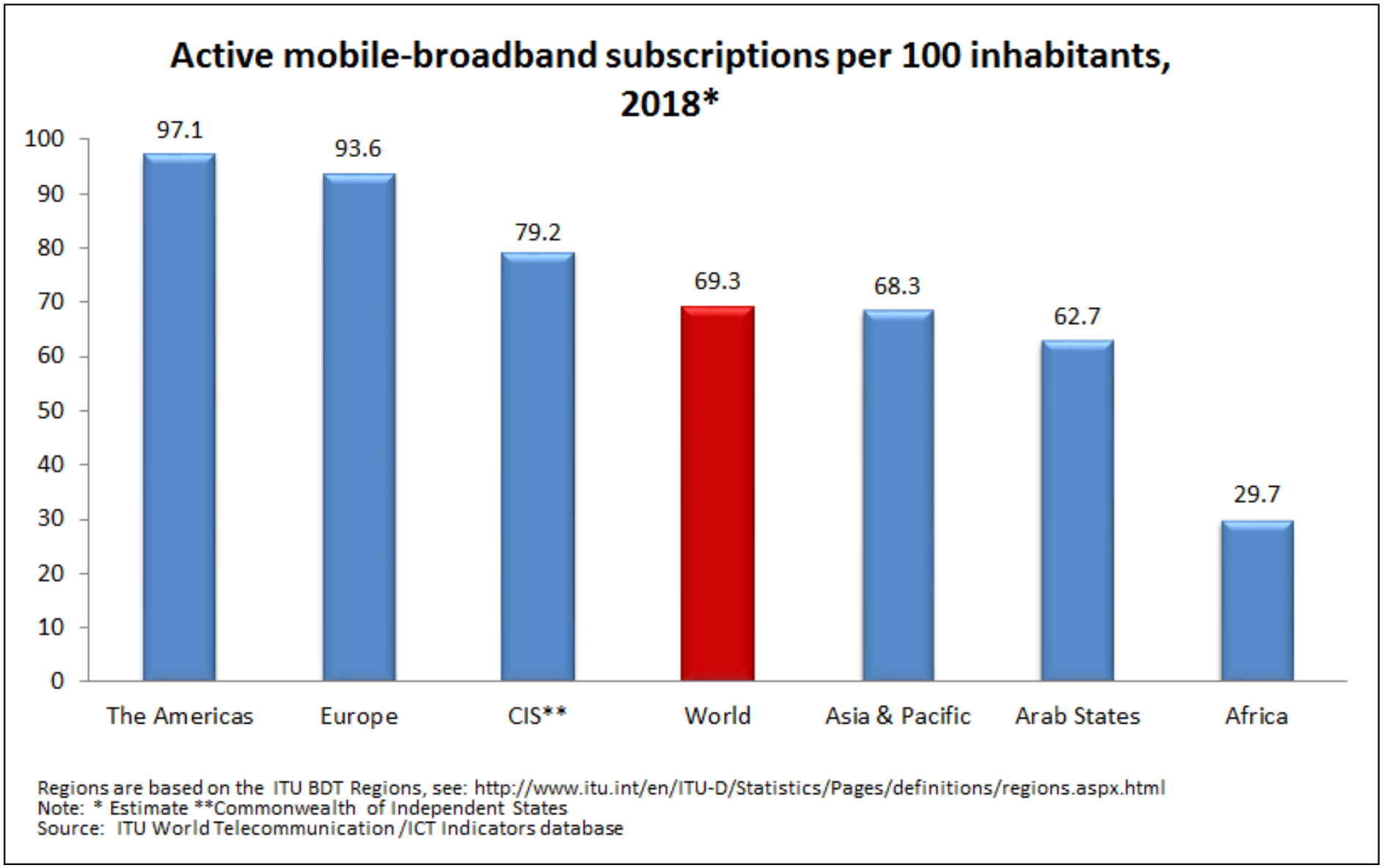
** Mid-year figures. https://investor.fb.com/investor-news/press-release-details/2018/Facebook-Reports-Fourth-Quarter-and-Full-Year-2017-Results/default.aspx and https://zephoria.com/top-15-valuable-facebook-statistics/*

Global ICT developments, 2001-2018*



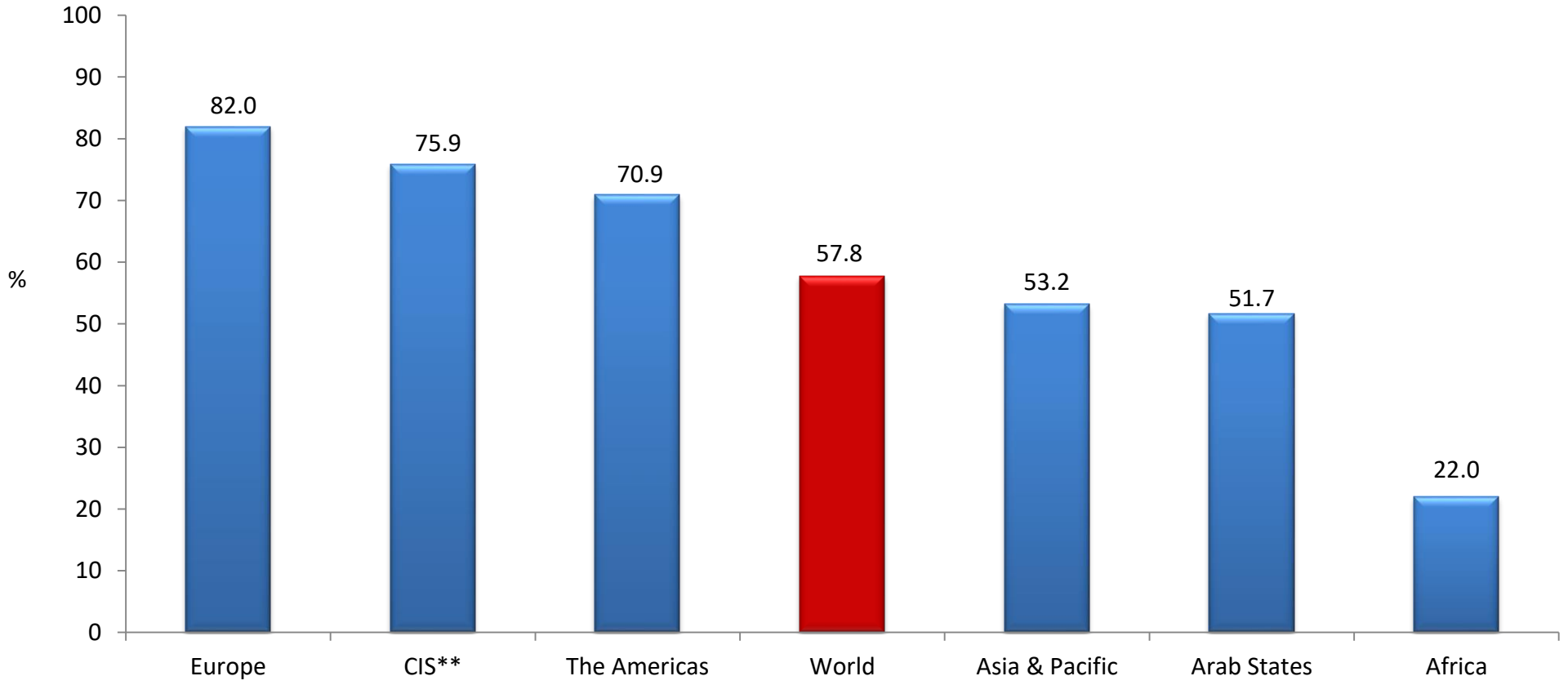


Active mobile-broadband subscriptions per 100 inhabitants, 2018*



Regions are based on the ITU BDT Regions, see: http://www.itu.int/en/ITU-D/Statistics/Pages/definitions/regions.aspx.html
Note: * Estimate **Commonwealth of Independent States
Source: ITU World Telecommunication /ICT Indicators database

Percentage of households with Internet, by region, 2018*



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Note: * Estimate ** Commonwealth of Independent States
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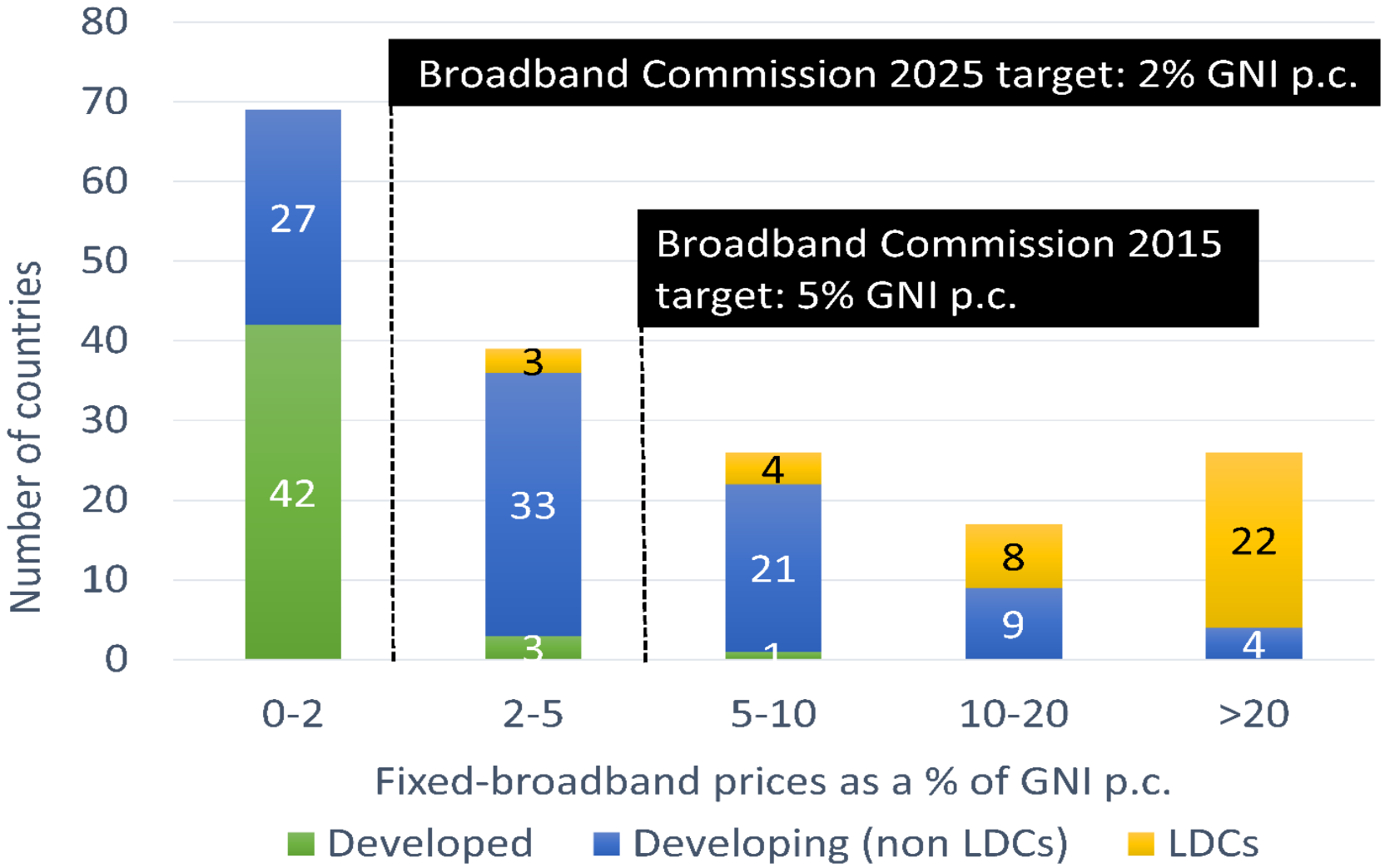
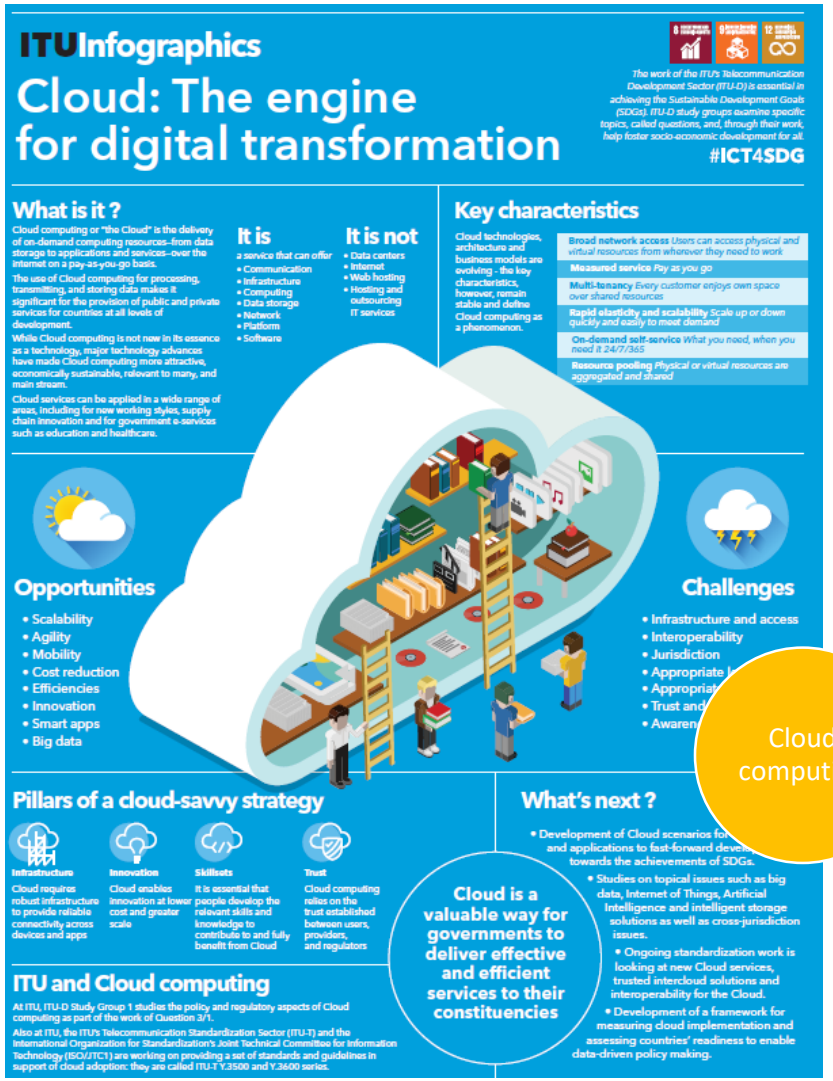
Countries having achieved the Broadband Commission targets

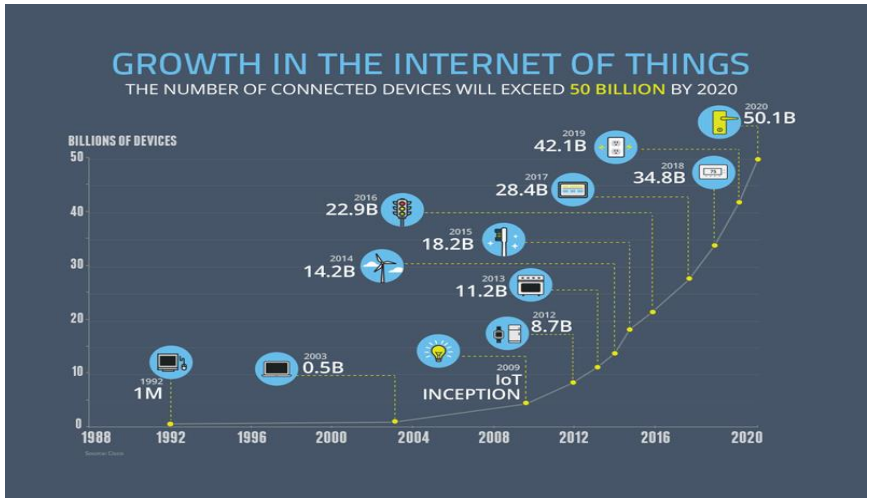


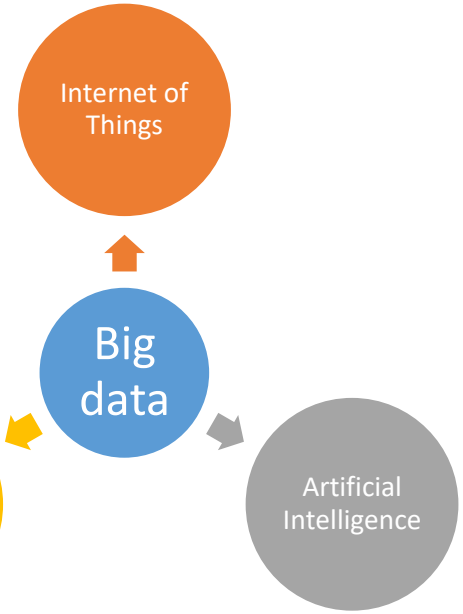
Fixed broadband services

Source: ITU.

Cloud Computing, IOT, AI, Big Data , Blockchain Machine Learning



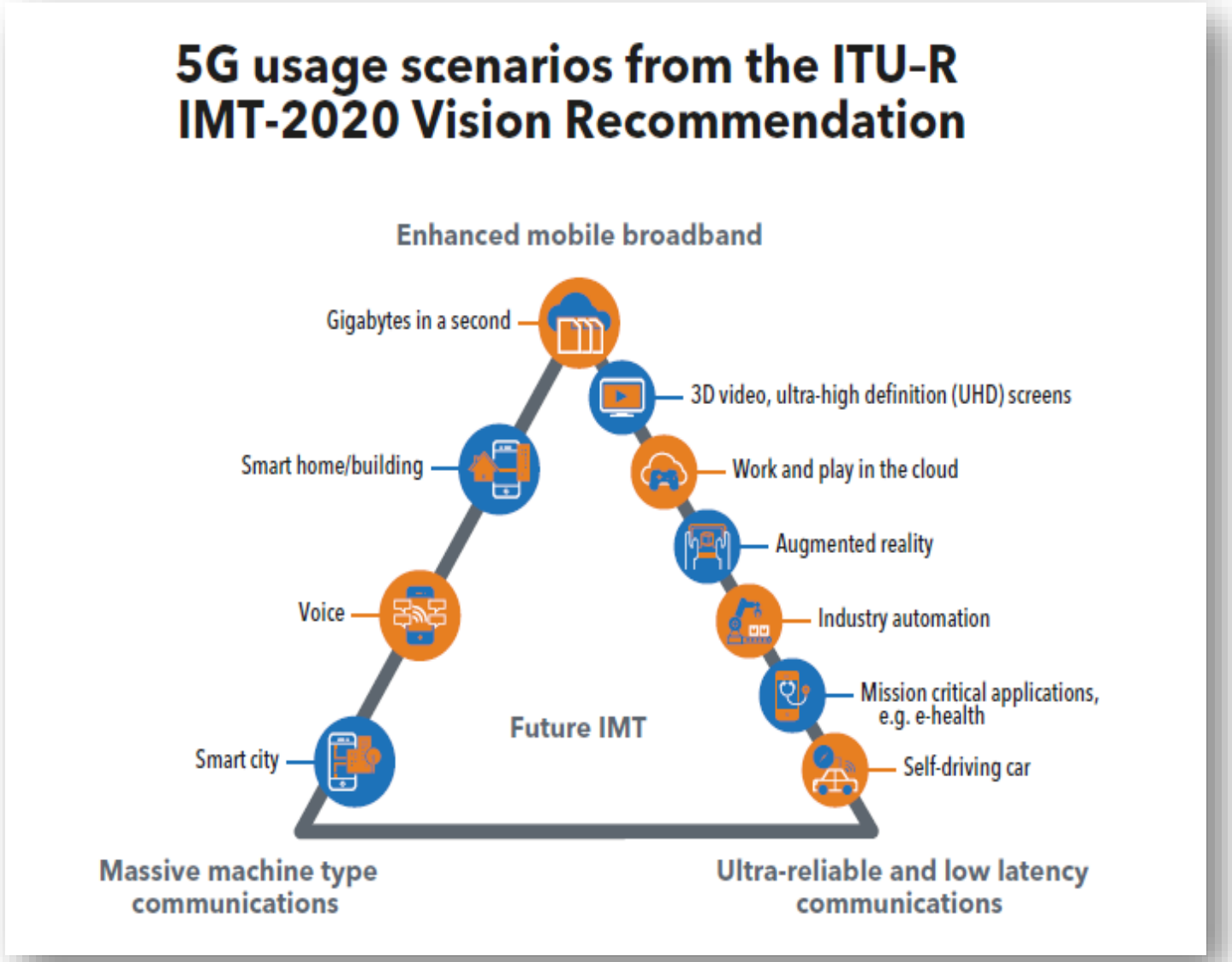


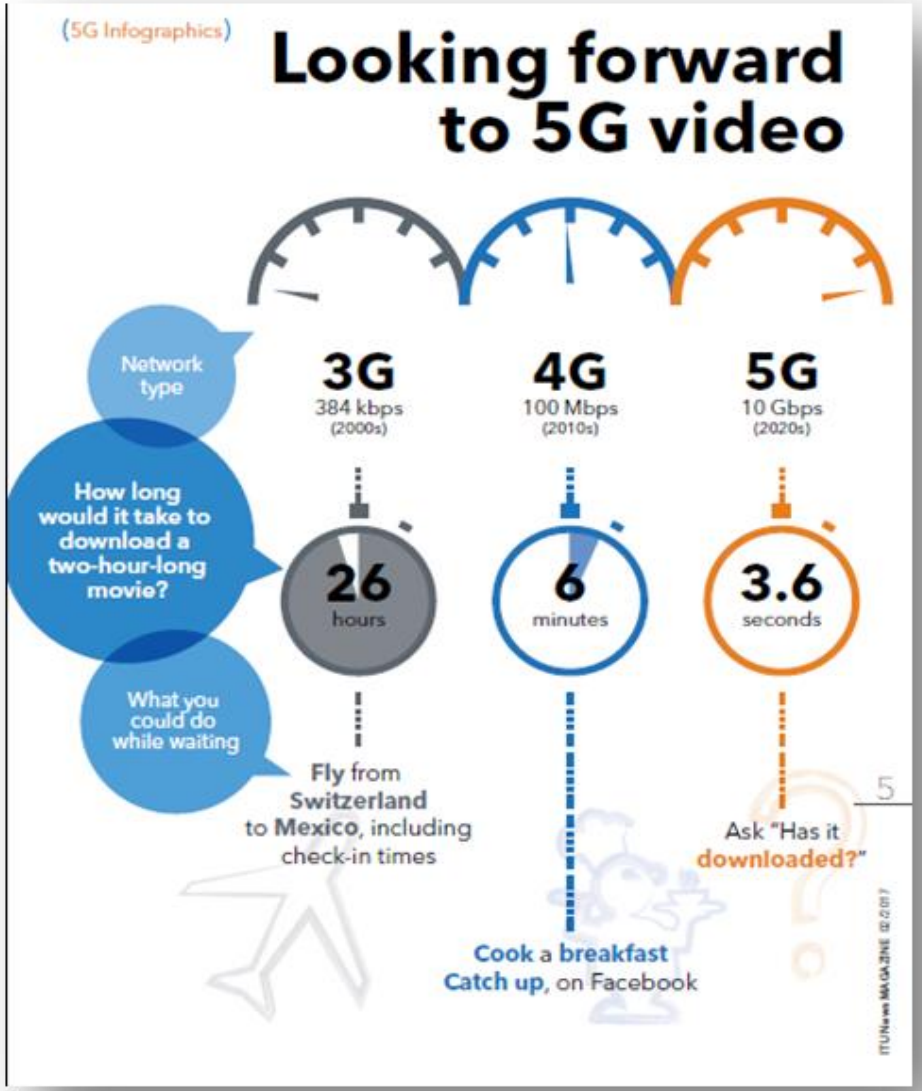


Focus Group on Technologies for Network 2030: ITU- T SG 13

37 UN Agencies (May 2019)
35 innovative project proposals leveraging the power of ICT

IMT 2020 : 5G and beyond….





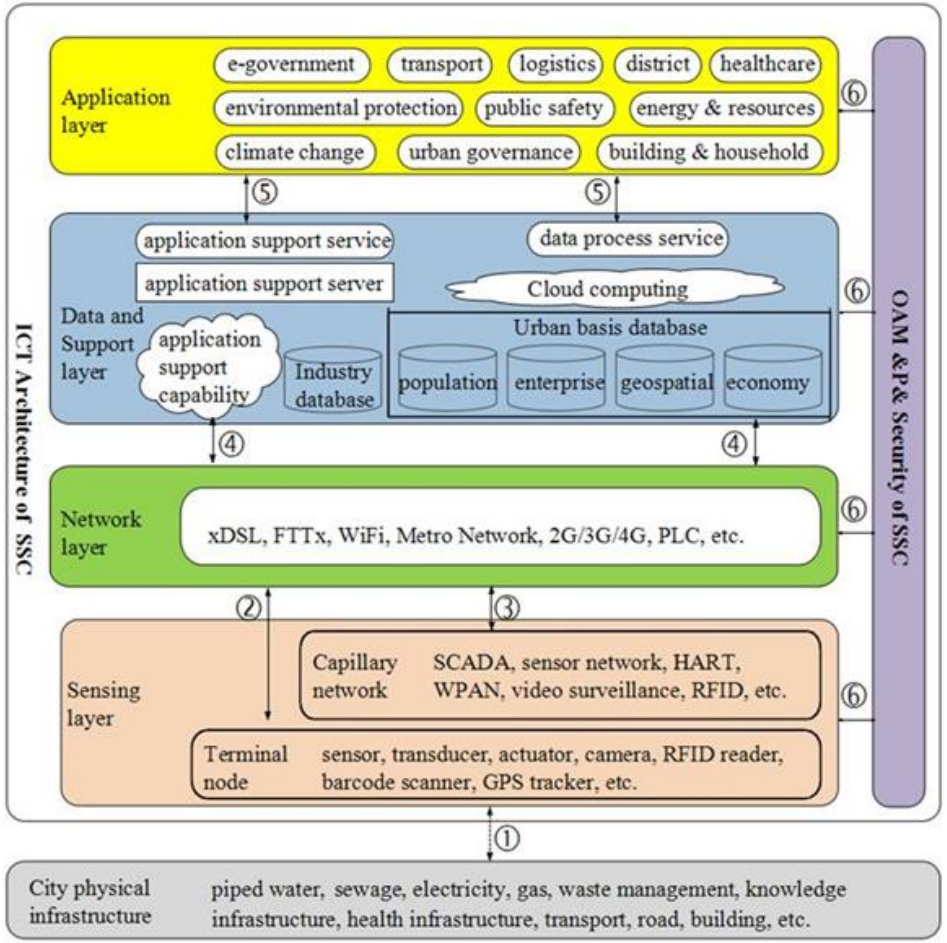
5G Deployment Challenge in Asia-Pacific

Summary	Suggestions customized for Asia-Pacific from 2018 ITU Report "Setting the Scene for 5G: Opportunitie s& Challenges"
Investment case	Policymakers may consider undertaking their own independent economic case assessment of the commercial viability of deploying 5G networks while in the interim facilitating 4G network deployment and where appropriate 2G/3G switchoff
Harmonize spectrum	Regulators should allocate/assign globally harmonized 5G spectrum including 3.5 GHz, mmWave, 2.6 TDD GHz, 2.3 GHz, 700 and 600 MHz
Spectrum roadmap	Regulators should adopt a spectrum roadmap and a predictable roadmap renewal process
Spectrum sharing	Regulators may consider allowing sharing to maximize efficient use of available sharing spectrum, particularly to benefit rural areas
Spectrum pricing	Regulators may consider selecting spectrum award procedures that favour investment (As opposed to auction returns)
Sub-1 GHz spectrum	Policymakers should consider supporting the use of affordable wireless coverage (eg through the 700 & 600 MHz bands) to reduce the digital divide
Fibre investment incentives	Policymakers, where the market has failed, may consider stimulating fibre investment and passive assets through PPPs, investment funds and the offering of grant funding, etc.
Fibre tax	Policymakers may consider removing any tax burdens associated with deploying fibre networks to reduce the associated costs
Copper to fibre	Policymakers may consider adopting policies/financial incentives to to encourage migration from copper to fibre & stimulate deployment of fibre
Wireless backhaul	Wireless Operators may consider a portfolio of wireless technologies for 5G backhaul backhaul in addition to fibre, including point-to-multipoint (PMP), microwave and mmWave radio relays, satellites etc
Access/sharing of passive infrastructure	Policymakers may consider allowing access to government-owned infrastructure such as utility poles, traffic lights and lampposts to give wireless operators the appropriate rights to deploy electronic small cell apparatus to street furniture. And Regulators may consider continuing to elaborate existing duct access regimes to encompass 5G networks allowing affordable fibre deployments
Access costs	Policymakers/Regulators may consider ensuring reasonable fees are charged to operators to deploy small-cell radio equipment
Asset database	Policymakers may consider holding a central database identifying key contacts, showing assets such as utility ducts, fibre networks, CCTV posts, lampposts, etc. This will help operators cost and plan their infrastructure deployment more accurately
Wayleaves (ROW)	Policymakers may agree upon standardized wayleave agreements to (rights of way) reduce cost and time to deploy fibre & wireless
5G test beds	Policymakers to encourage 5G pilots and test beds to test 5G technologies, & use cases, and to stimulate market engagement

https://www.itu.int/pub/D-PREF-BB.5G_01-2018

Digital Transformation & Digital Economy

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



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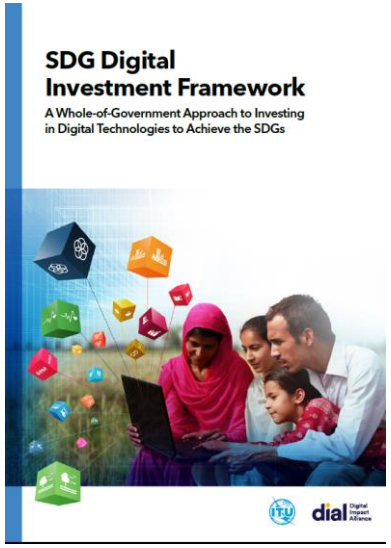
Enabling Environment , Digital Inclusion

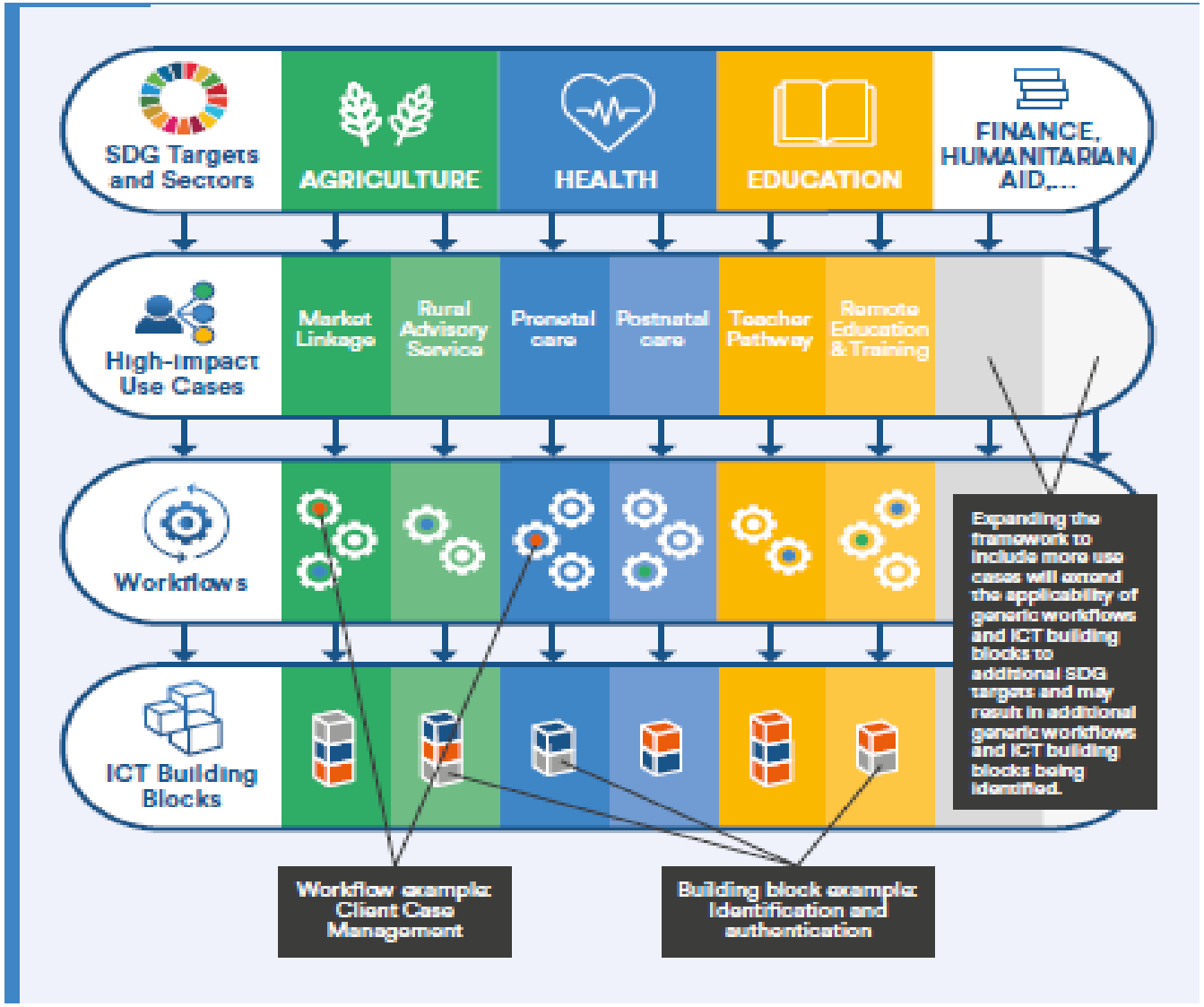
Skills and capacity Building

Innovation

Source: ITU-T Focus Group on Smart Sustainable Cities

Example architectural map using the SDG Digital Investment Framework

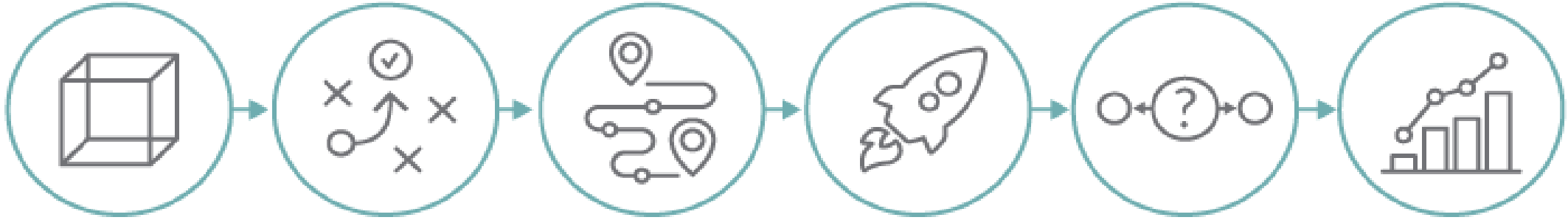




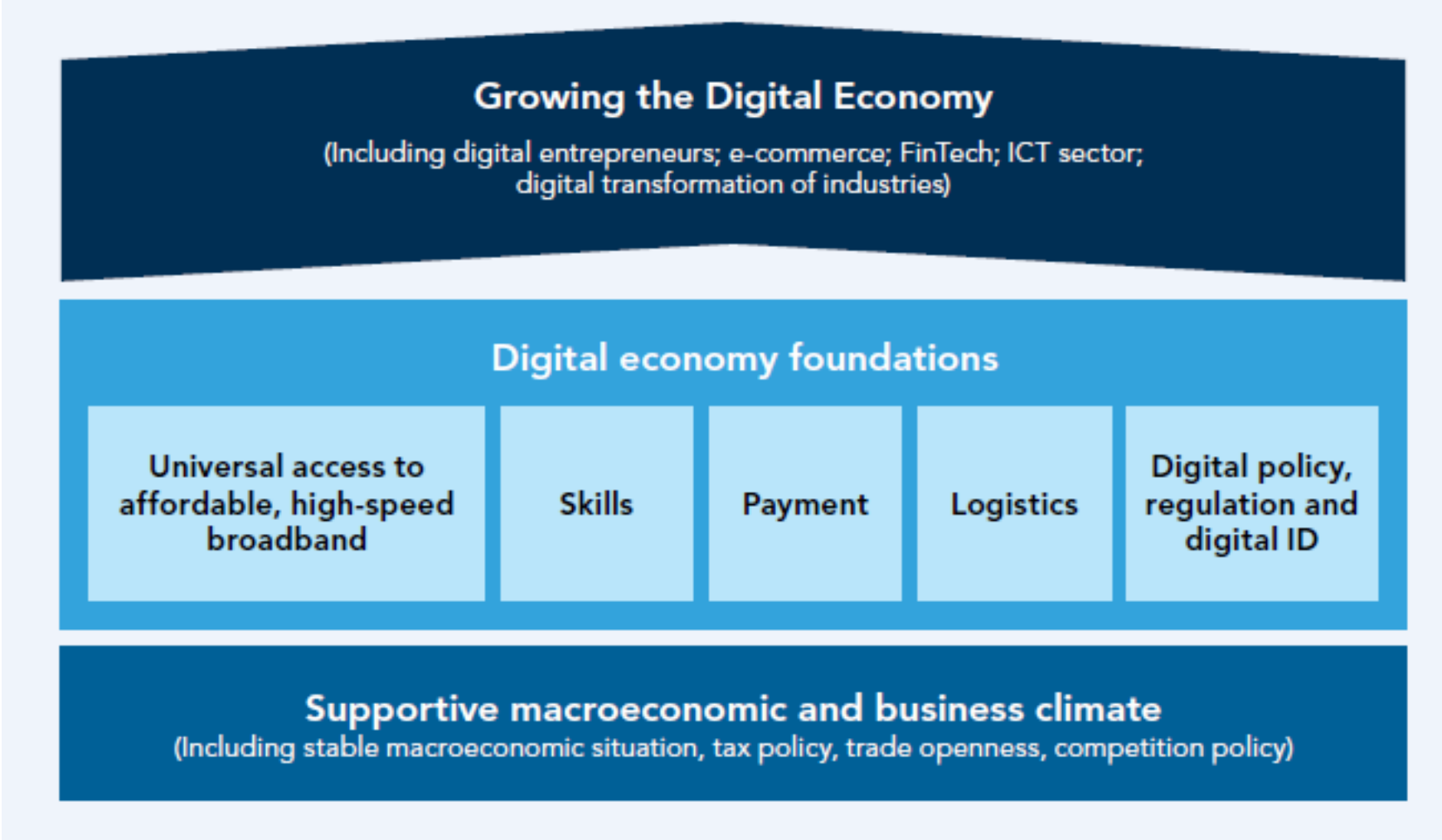
Common ICT Building Blocks enable generic business processes, or WorkFlows, that can be combined and repurposed in multiple ways to deliver priority Use Cases that contribute to SDG Targets.

National governments can prioritize Use Cases according to citizens' needs (eg improve neonatal outcomes), map functionality across sectors, and then invest in shared infrastructure comprising ICT Building Blocks.

Digital Transformation Process

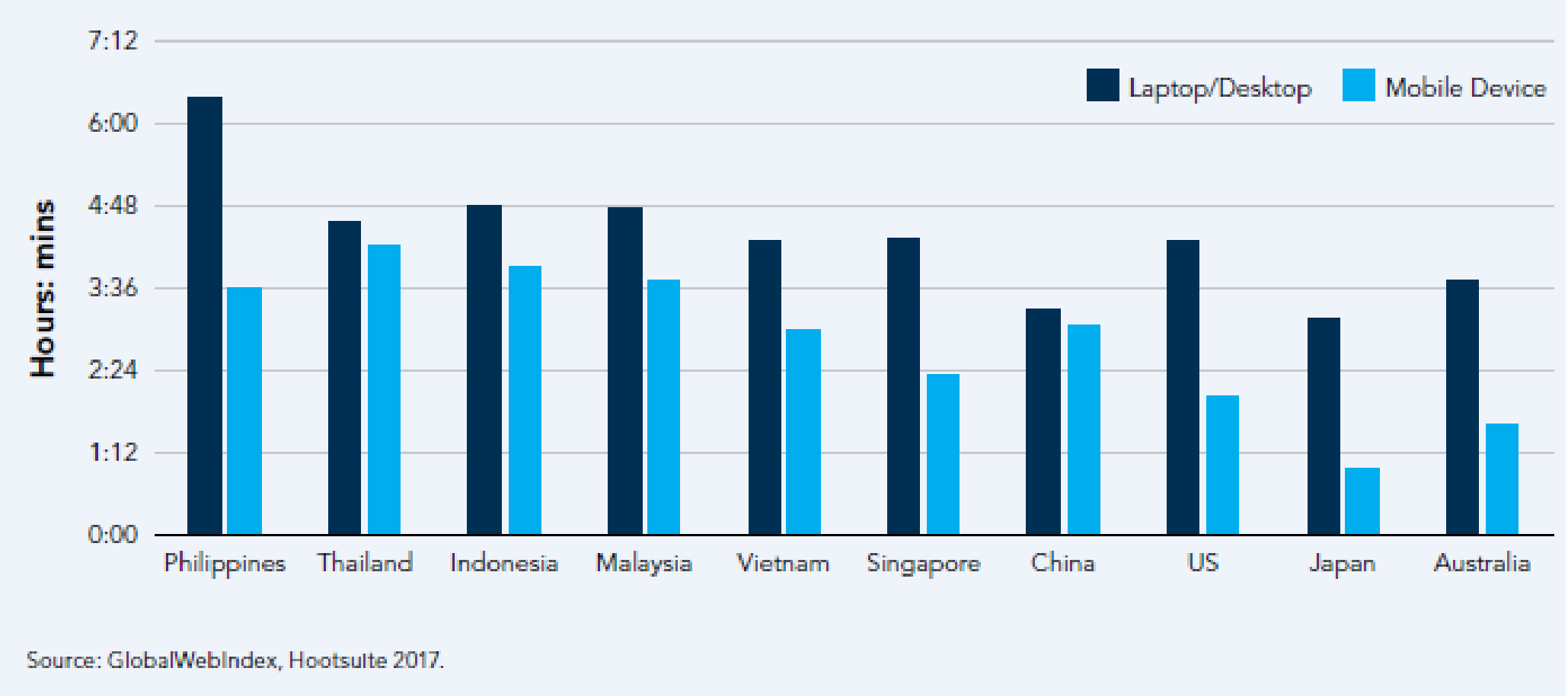


Foundations for growing the digital economy in Southeast Asia



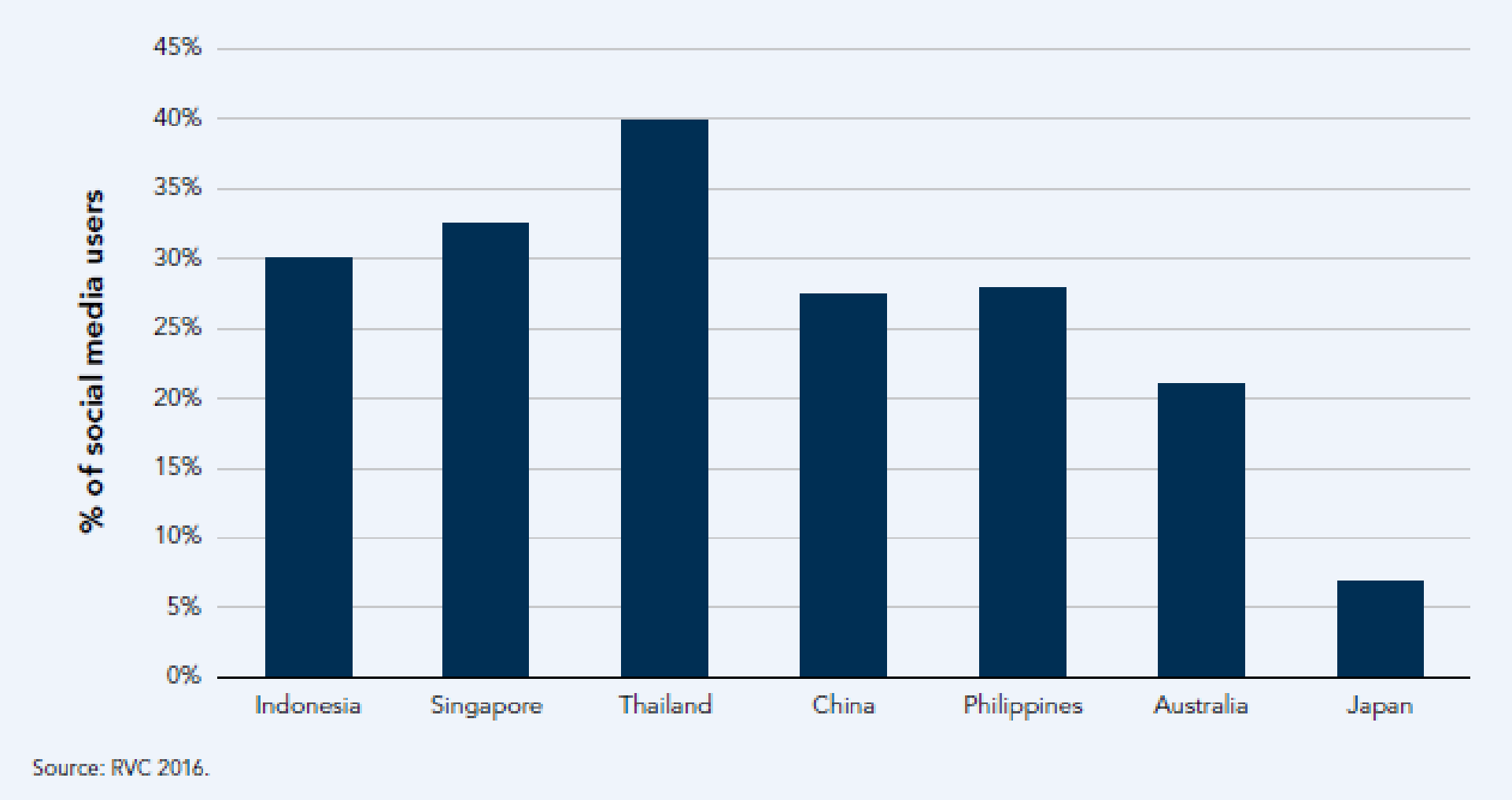
Source: Digital Development Partnership : World Bank 2019

Time spent on the Internet daily



Source: Digital Development Partnership : World Bank 2019

Percentage of social media users who make purchases on social media



Source: Digital Development Partnership : World Bank 2019

Core Challenges in Digital Transformation

ITU innovation research has shown that there are many barriers to digital transformation, notably:

- Lack of coordination or of mechanisms to develop contextual and relevant policies supporting digital innovation and entrepreneurship;
- Unclear roles or engagement of stakeholders in developing their innovation ecosystem;
- Missing innovation capabilities, especially soft infrastructure;
- Suboptimal integration of innovation ecosystems into key sectors of the economy; and
- Impact of the fast-changing ICT/telecommunication environment.

Digital Transformation: Opportunities and barriers

ITU's Digital Innovation Framework defines the seven critical pillars of an innovation ecosystem: vision and strategy, capital, market, infrastructure, talent, culture and policy. They need to be assessed to obtain a comprehensive view of the system's performance.

Understanding the issues pertaining to each pillar through the lens of the stakeholders' journey helps identify the opportunities of, and barriers to, digital transformation.

Key factors and components that enhance, foster and facilitate digital transformation are clearly clustered and helpfully organized in the diagram above.

Source: ITU.

GSR-18 Best practice guidelines
New Regulatory Frontiers to Achieve Digital Transformation

Regulators participating in the 2018 Global Symposium for Regulators, recognize that, flexible and innovative policy and regulatory approaches can support and incentivize digital transformation. The best practices in this regard would allow us to respond to the changing landscape and address the continuing need for secure and reliable ICT infrastructure, affordable access to and delivery of digital services, as well as protect consumers and maintain trust in ICTs.


ITUGSR
GENEVA 2018

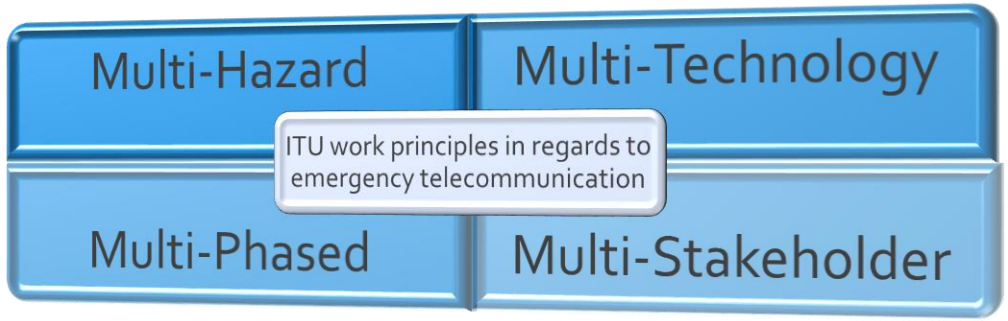
GSR18 BEST PRACTICE GUIDELINES ON NEW REGULATORY FRONTIERS TO ACHIEVE DIGITAL TRANSFORMATION

I. **Fostering the potential of emerging technologies for digital transformation**
II. **Business and investment models to support digital transformation**
III. **Policy and regulatory approaches for continued innovation and progress**

Digital Transformation to achieve SDGs

ICTs for Saving Life :Emergency Telecommunications

Emergency telecommunications is an integral part of Telecommunications Development Bureau (BDT). Emergency Telecommunications division implements **activities** related to telecommunications/ICTs in disaster management and disaster risk reduction.



Importance of ITU's Assistance

Providing a communication equipment for the government that is critical in:

- Coordinating rescue and relief operations;
- Setting up telemedicine links between hospitals and medics in the field;
- Providing call centers where disaster victims can contact their loved ones.
- Coordinating infrastructure recovery/re-building operations.

Cybersecurity Assistance Strategy

6 Service Areas – 18 Services

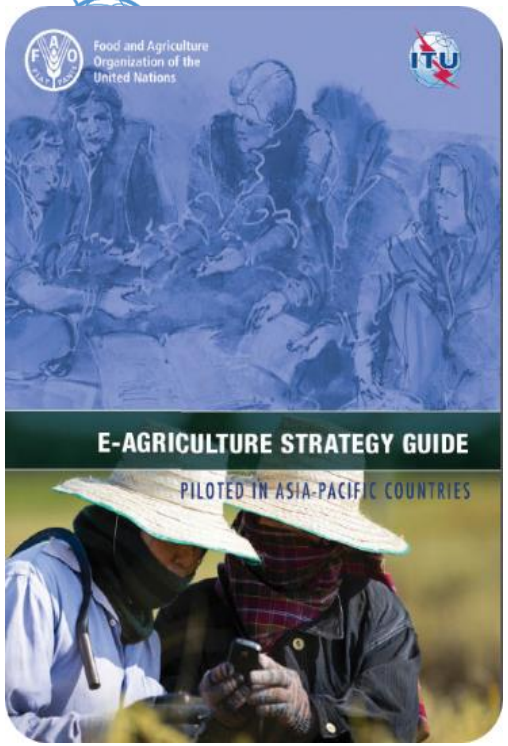
- **Engagement and awareness**
  - Global Cybersecurity Index
  - Global, Regional and National events
  - High-Level Cybersecurity Simulations
  - Information Dissemination
- **National Cybersecurity Assistance**
  - National Cybersecurity Assessment
  - National Cybersecurity strategy support
  - Critical Infrastructure Protection Support
  - Technical Assistance
- **Computer Incident Response Team (CIRT) Program**
  - CIRT Assessment
  - CIRT Design
  - CIRT Establishmemt
  - CIRT Improvement
- **Information sharing**
  - Best Practices Sharing
  - Information Exchange Tools and Techniques
- **Cyber Drills**
  - Regional drills
  - National drills
- **Human Capacity Building**
  - Curricula and Training Programs
  - Bespoke Training

ITU-UNESCAP : Interactive Terrestrial Transmission Maps

- Core transmission networks are the essential underpinning of broadband access networks.
- The IP connectivity required to deliver these content, services and applications is achieved at certain Tier 1 points of presence (POPs), which are physically located in buildings in certain places.
- What to make available and to whom? Policy controlled through the format in which the map and its underlying database is made available, and the level of disclosure is addressed as part of a formal validation process

(**Link** : http://www.itu.int/itu-d/tnd-map-public/)

- Over 3.4 million km of Transmission Networks are now represented in the map interface for all regions (increase of 29% over the last 12 months, compared to July 2017)
- Asia-Pacific region remains the largest region represented in the map in terms of data, with almost twice the number of kilometres as the next largest region (CIS)
- Asia-Pacific contains over 1 million kilometres of network data. Over 200,000km have been added in the last 12 months (= 26% increase since July 2017)
- Submarine Cables and Global Internet Exchange Points are now displayed by default when the Transmission Map loads, offering a full view of the complexities of international transmission networks when the map loads.

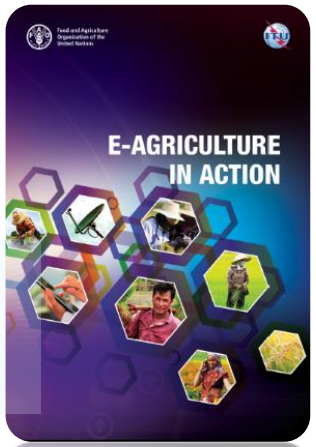


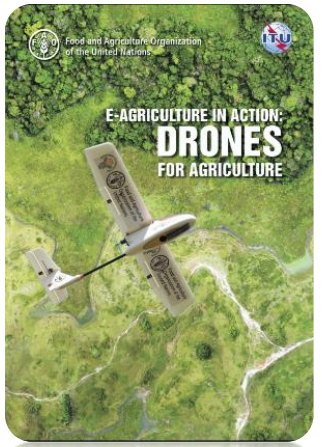
Strategy Guide

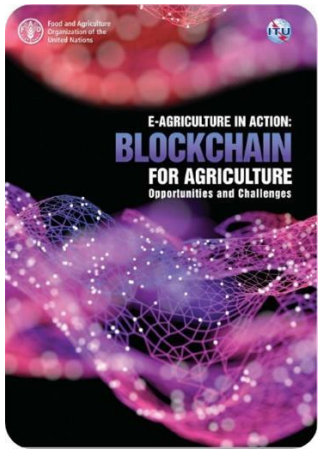
Country Assistances

Afghanistan
Bhutan
Fiji
Mongolia
Papua New Guinea
Pakistan
Philippines
Sri Lanka

Case studies







Solutions Forum

agriculture SOLUTIONS FORUM 2016
agriculture SOLUTIONS FORUM 2018

Trainings

FAO-ITU: E-agriculture Strategy Development
FAO-ITU-GIC: Use of drones, satellite imagery and GIS from agriculture

Food and Agriculture Organization of the United Nations

ITU

E-agriculture – Asia-Pacific

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, Bill & Melinda Gates Foundation and CAICT as part of FIGI project

India (2018)

Capacity building on Understanding Digital Payments with Niti Aayog and DOT

Thailand (2018)

Regional CoE training on Distributed Ledger Technologies with NBTC and MDES (Thailand)

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

ITU activities global (examples)

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)

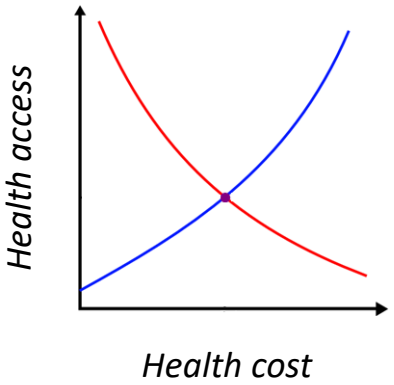
FIGI Project (ITU, World Bank, Bill & Melinda Gates Foundation)

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

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

NCD Deaths – **38 million** annually

2011 UN High-level Declaration on NCDs



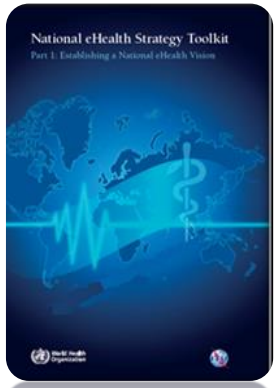
Country Assistances

India : mTobacco Cessation
Philippines : mTobacco Cessation
Request from 100 countries

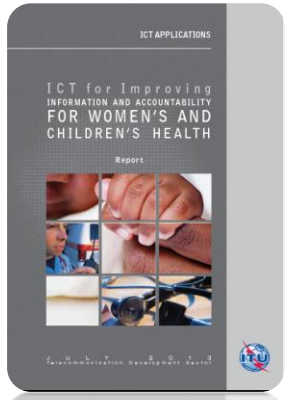
Survey on Tobacco : Compliance / Non Compliance

Thailand
Pakistan
Mongolia
Chile

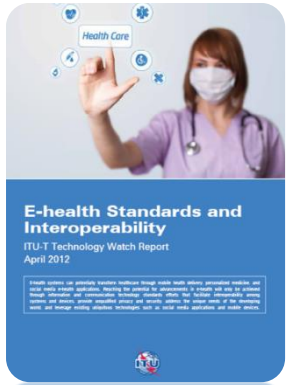
tobaccospotter.org #ReadySpotGo



National eHealth Strategy Toolkit
National Strategies : 69
eHealth Information System : 76



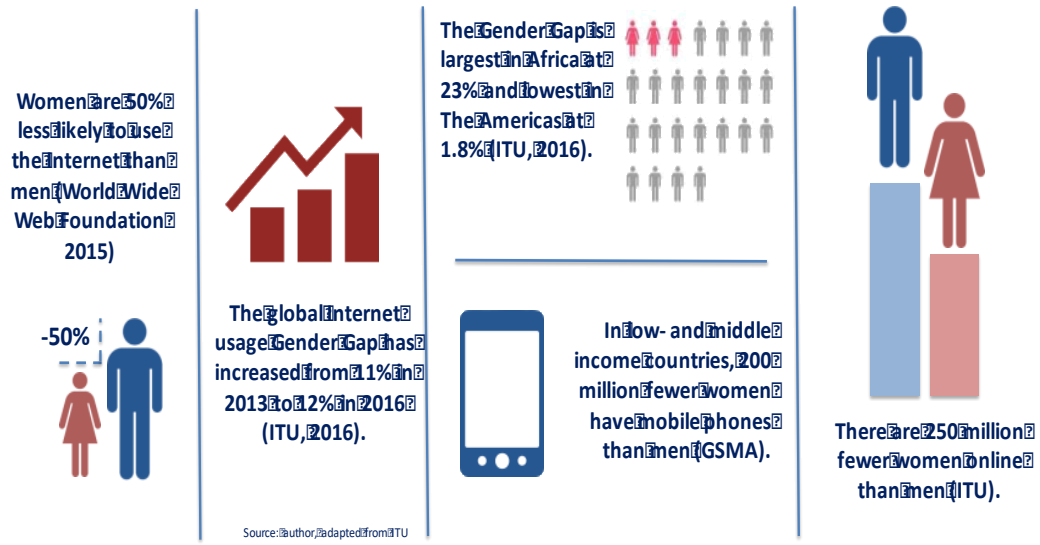
ICT for Women & Children's Health

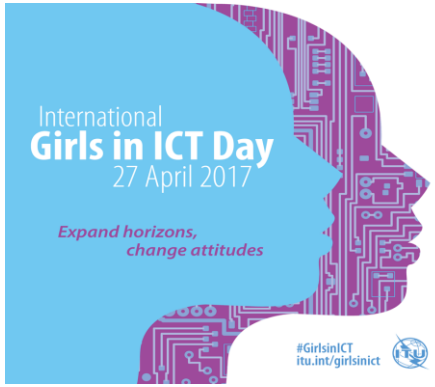


Interoperable standards on e-Health

SDG5 Gender Equality

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





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

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

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'.

United 4 Smart Sustainable Cities (U4SSC): SDG 11

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**

UN4SCC developed set of KPI criteria to evaluate ICT´s contributions in making cities smarter and more sustainable, and to provide cities with the means for self-assessments in order to achieve the sustainable development goals (SDGs).

ITU-UNU Global E-waste Monitor 2017

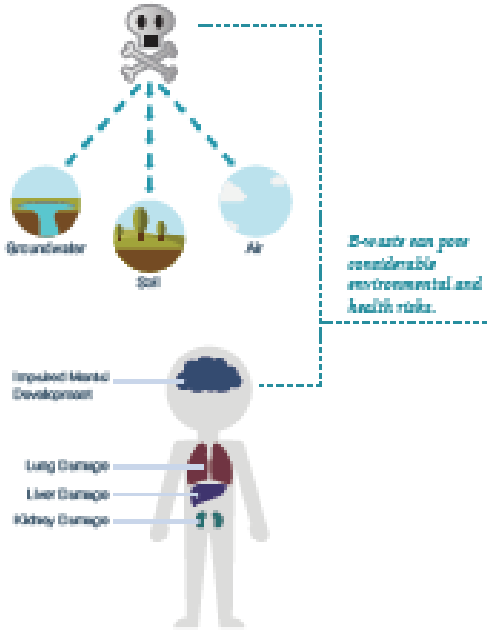
SDG 12, to 'Ensure sustainable consumption and production patterns

The Partnership

UNITED NATIONS UNIVERSITY
UNU-VIE SCYCLE
ISWA International Solid Waste Association
ITU

The e-waste challenge

More and more people are joining and benefiting from the opportunities of the digital economy and information society. As a result, the amount of electronic waste, or e-waste, is growing rapidly and large dump sites exist throughout the world.



Discarded equipment, such as phones, laptops, sensors, TVs, and batteries contain substances that pose considerable environmental and health risks, especially if treated inadequately. Most e-waste is not properly documented and not treated through appropriate recycling chains and methods. The majority ends up in dumpsites. Often, only anecdotal evidence is available on the production, management, and recycling of e-waste and valuable resources are wasted.

Better e-waste data for better e-waste policies

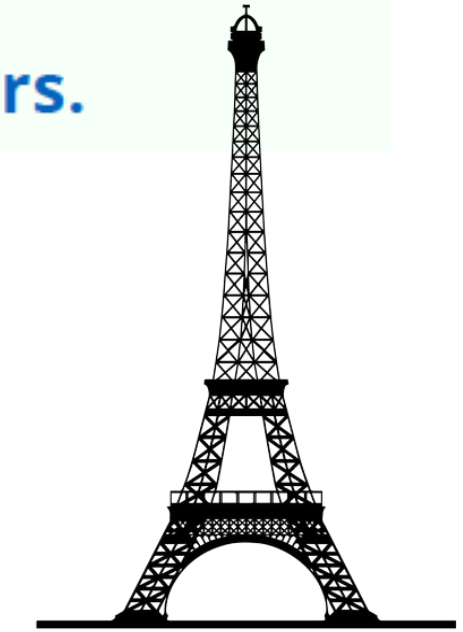
Measuring e-waste is an important step towards addressing the e-waste challenge. Statistics help to evaluate developments over time, set and assess targets, and identify best practices of policies. Better e-waste data will:

- Help to minimize its generation
- Prevent illegal dumping
- Promote recycling
- Create jobs in the refurbishment and recycling sector

Better e-waste data will contribute to the achievement of the Sustainable Development Goals, in particular SDG 12, to 'ensure sustainable consumption and production patterns', but also other SDGs. A global target to 'reduce the volume of redundant e-waste by 50% by 2020' was set by the International Telecommunication Union's (ITU) Membership.

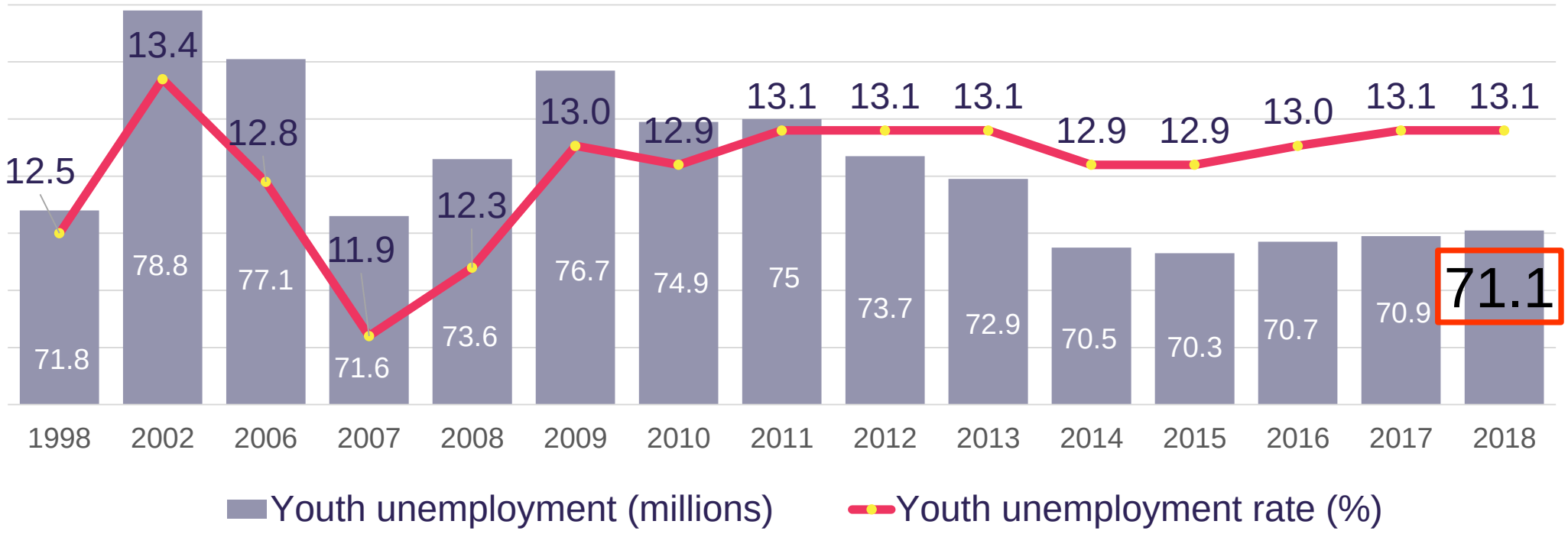
In 2016, 44.7 million metric tonnes of e-waste were generated.

This is an equivalent of almost 4,500 Eiffel towers.



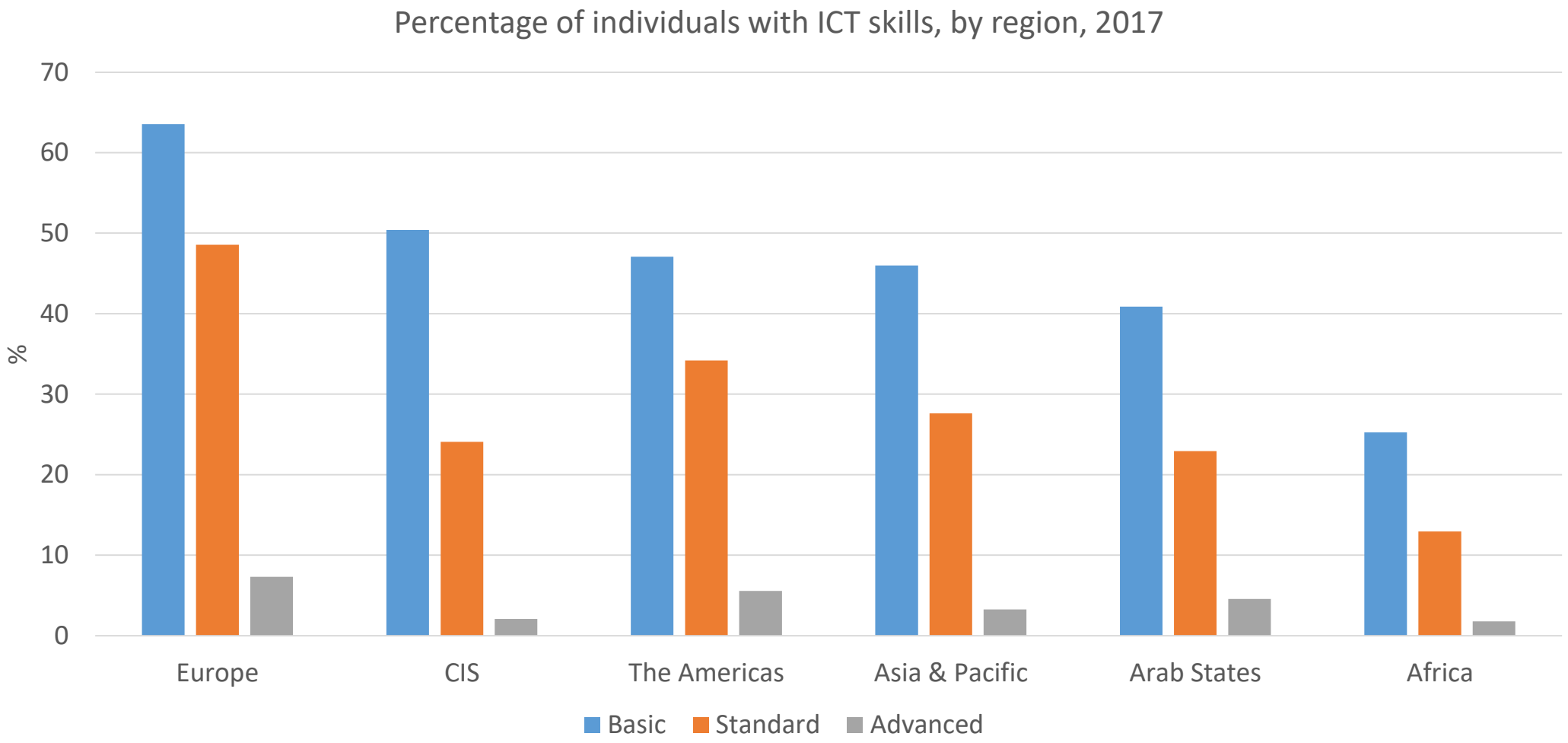
ICT Skills for the Future

Youth employment:
A challenge of both quality & quantity jobs

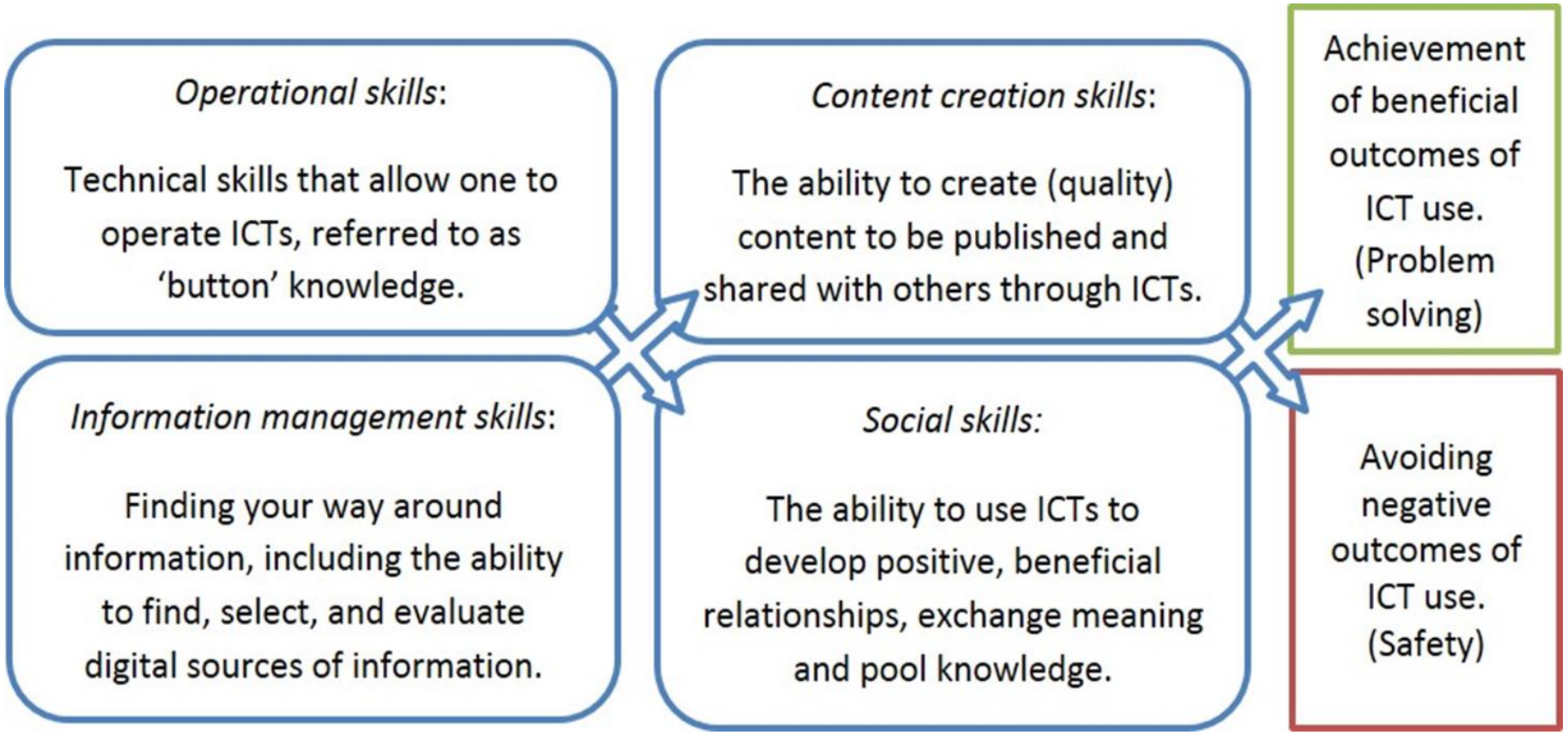


71 million youth are unemployed and
160.6 million are employed but live in poverty

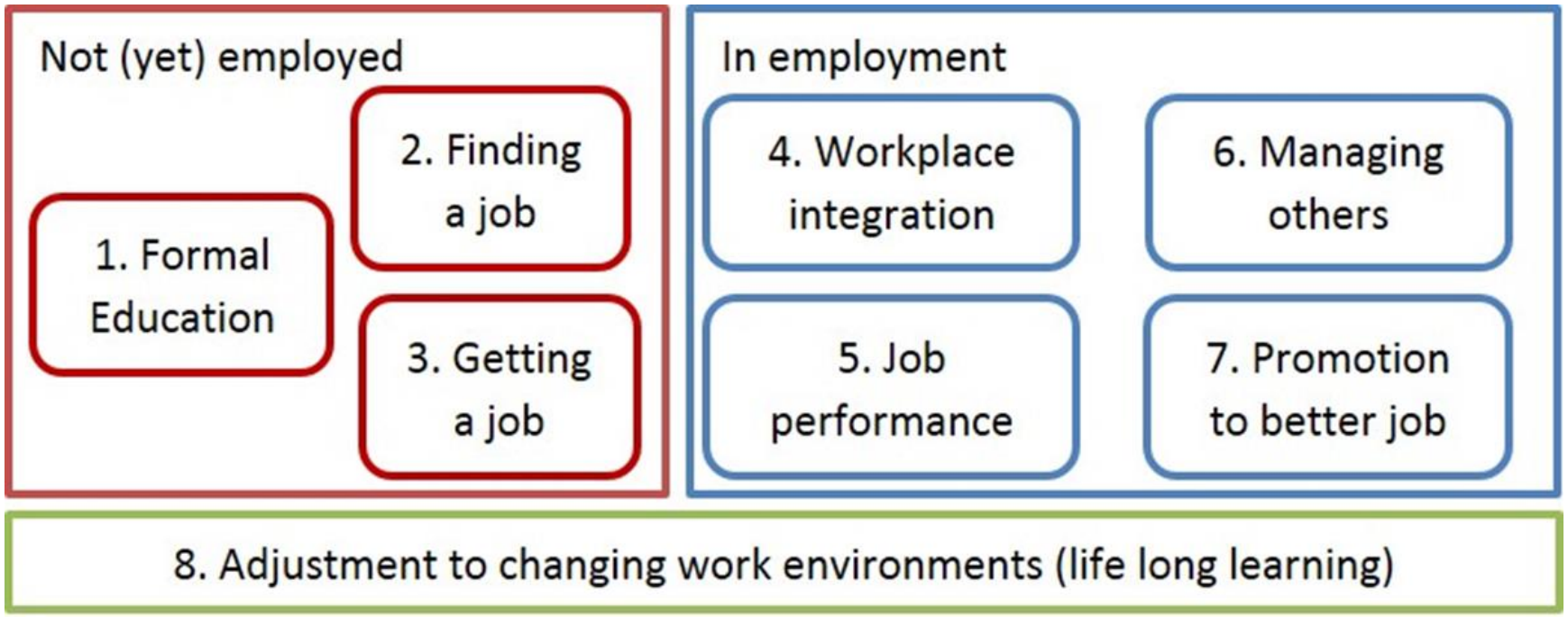
Skills differences have impact on effective use of the Internet



The importance of digital skills in society



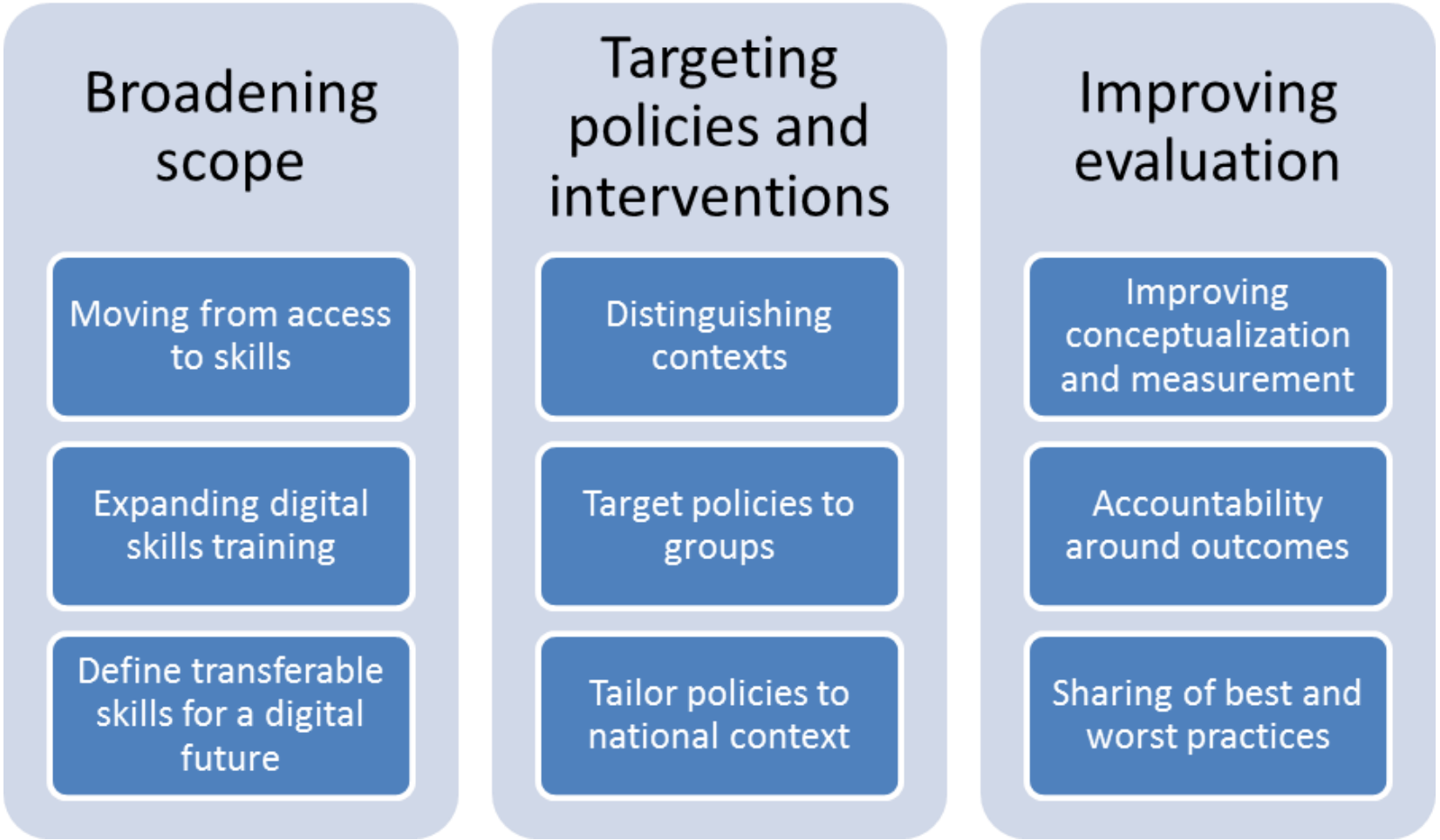
Skills are important at every stage of employment



Measuring digital skills

- Insufficient theoretical clarity how individuals' skills should be defined…
- … and how they should be measured
- Existing benchmarks are limited
  - primarily measuring technical or information searching aspects
  - often lacking creative and communicative skills
  - more often lacking management and critical skills

Policy agenda



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

- 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

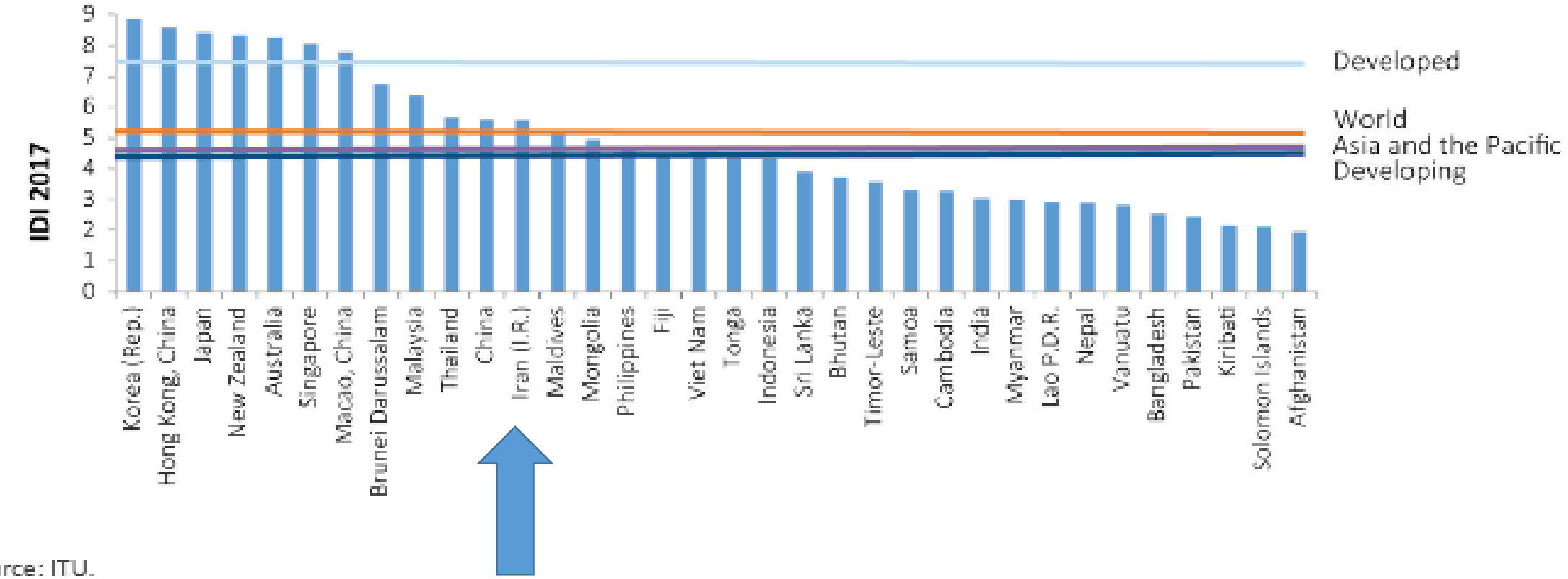
DECENT JOBS FOR YOUTH DIGITAL SKILLS CAMPAIGN

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

Digital Transformation : National Perspective

ICT Development Index : Asia-Pacific

Chart 3.7: IDI values, Asia and the Pacific, IDI 2017



Source: ITU.

ITU ICT Development Index IDI 2017 - Iran

Global Cybersecurity Index 2018

Rank	Member States	GCI Score	Legal	Technical	Organizational	Capacity building	Cooperation
1	United Kingdom	0.931	0.200	0.191	0.200	0.189	0.151
2	United States of America	0.926	0.200	0.184	0.200	0.191	0.151
3	France	0.918	0.200	0.193	0.200	0.186	0.139
4	Lithuania	0.908	0.200	0.168	0.200	0.185	0.155
5	Estonia	0.905	0.200	0.195	0.186	0.170	0.153
6	Singapore	0.898	0.200	0.186	0.192	0.195	0.125
7	Spain	0.896	0.200	0.180	0.200	0.168	0.148
8	Malaysia	0.893	0.179	0.196	0.200	0.198	0.120
9	Norway	0.892	0.191	0.196	0.177	0.185	0.143
10	Canada	0.892	0.195	0.189	0.200	0.172	0.137
11	Australia	0.890	0.200	0.174	0.200	0.176	0.139

6.4 Asia-Pacific region

Table 9: Top three scores in the Asia-Pacific region

Member States	GCI Score	Legal	Technical	Organizational	Capacity building	Cooperation
Singapore	0.898	0.200	0.186	0.192	0.195	0.125
Malaysia	0.893	0.179	0.196	0.200	0.198	0.120
Australia	0.890	0.200	0.174	0.200	0.176	0.139

Figure 18: Top three scores in the Asia-Pacific region according to the five pillars of GCI

ITU Global Cybersecurity Index GCI 2018 - Iran

Member State	Score	Regional Rank	Global Rank
Singapore	0.898	1	6
Malaysia	0.893	2	8
Australia	0.890	3	10
Japan	0.880	4	14
Republic of Korea	0.873	5	15
China	0.828	6	27
Thailand	0.796	7	35
New Zealand*	0.789	8	36
Indonesia	0.776	9	41
India	0.719	10	47
Viet Nam	0.693	11	50
Philippines	0.643	12	58
Iran	0.641	13	60

Summary (1)

- Given the crucial role of telecommunications/ICTs in Digital Transformation in the advancement of the Digital Economy, it is important to enhance international cooperation on sharing best practice in digital transformation and the development of approaches, regulatory texts, standards and applications for the digital economy.
- With this in mind, the Training course has been designed to:
  - ✓Inform and create awareness of the use of telecommunications or ICT in support of the digital economy and society;
  - ✓Share international best practices on Digital Transformation; and
  - ✓Build capacity and skills development in the digital era through digital transformation.

Summary (2)

Topics covered in this training include:

- The role of innovation and new technologies for achieving SDGs
- Digital transformation and the digital economy
- Fostering innovation in the workplace and the community
- Modern design processes and methodologies
- Technology skill development for employment and business growth
- Introduction to mobile app development
- Country Case Studies
- Mini Hackathon

Thank You