

ICT and Development

International Telecommunication Union (ITU)

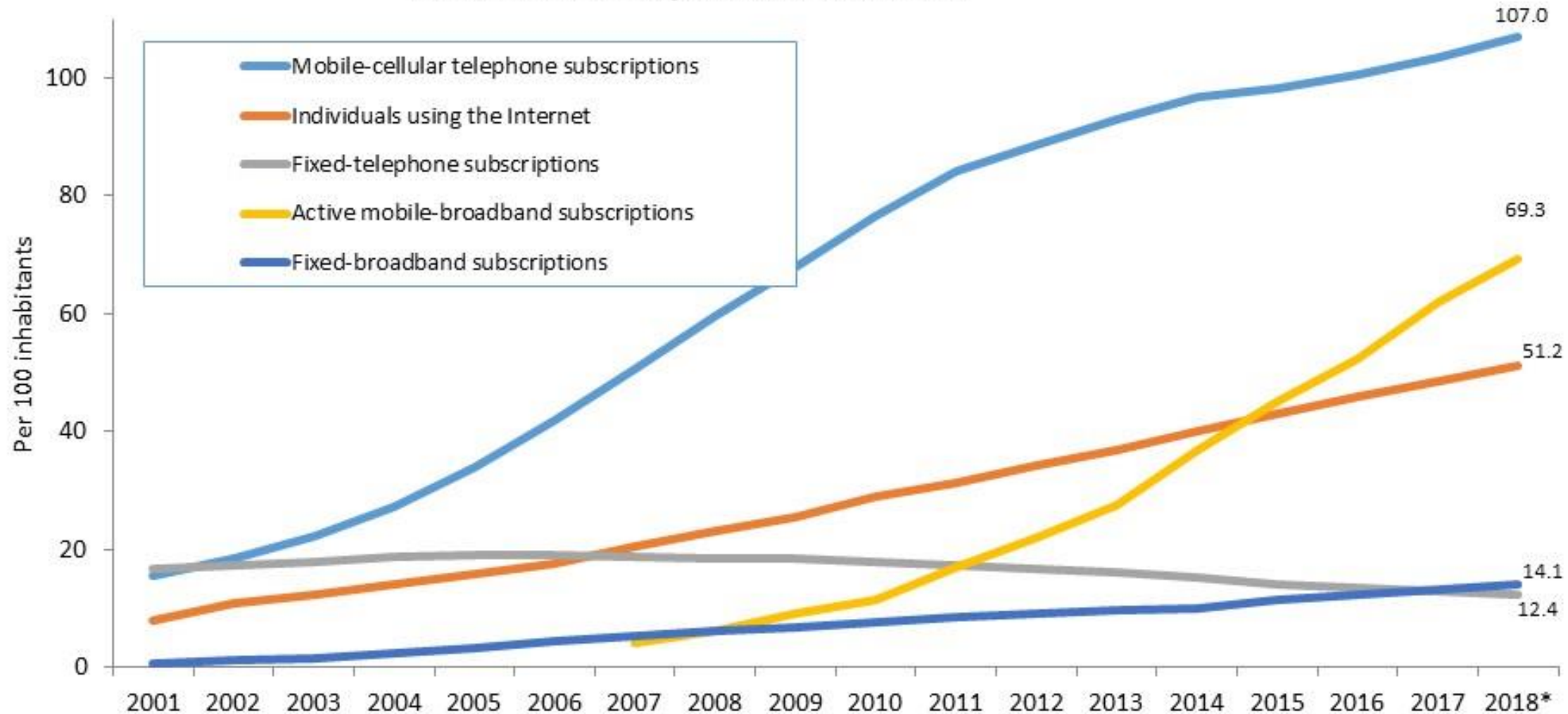


51%
of the world
population is online

Measuring the Information Society Report
#ITUdata



Global ICT developments, 2001-2018*



Note: * Estimate

Source: ITU World Telecommunication/ICT Indicators database




ITU: Mission and Goals


- **United Nations Specialized Agency** for Telecommunications/Information and Communication Technologies (ICTs)
- ITU aims at **international cooperation** among all its Member States for the improvement and rational use of telecommunications of all kinds.
- ITU fosters international cooperation and solidarity in the delivery of **technical assistance** and to upgrade the **telecommunication/ICT infrastructure and services**.

ITU Membership

- Specialized United Nations (UN) Agency for Telecommunications/Information and Communication Technologies (ICTs).

193
MEMBER STATES 

700
SECTOR MEMBERS 

135
ACADEMIA MEMBERS 

3
SECTORS



Standardization

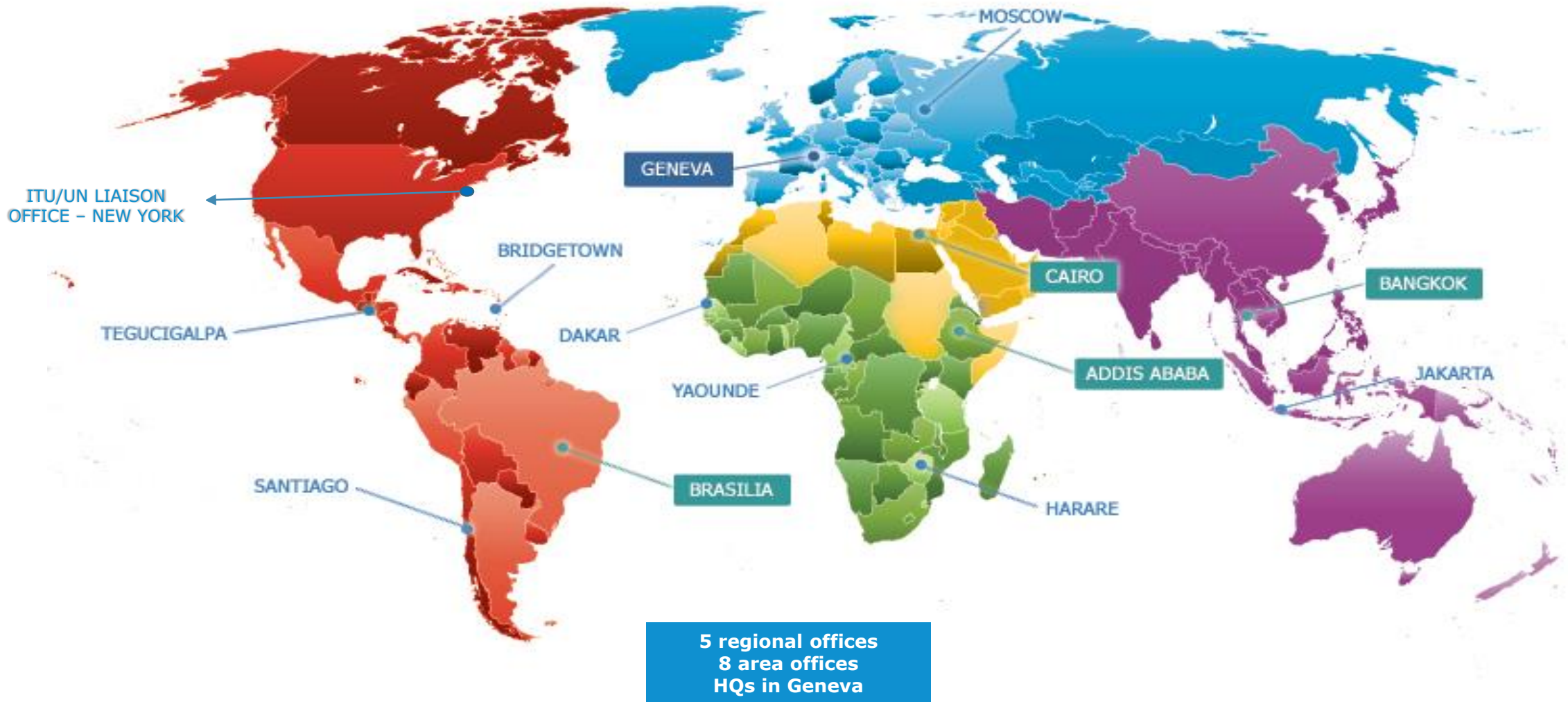
Radiocommunication

Development



Each sector has separate mandate, but all work cohesively towards connecting the world

ITU's Global/Regional Presence



ITU-D: Key Areas of Actions



Climate change



Digital Inclusion



ICT Applications



Innovation



Cyber Security



Capacity Building



Technology & Network Development



Regulatory & Market Environment



Emergency Telecommunication



Spectrum Management & Broadcasting

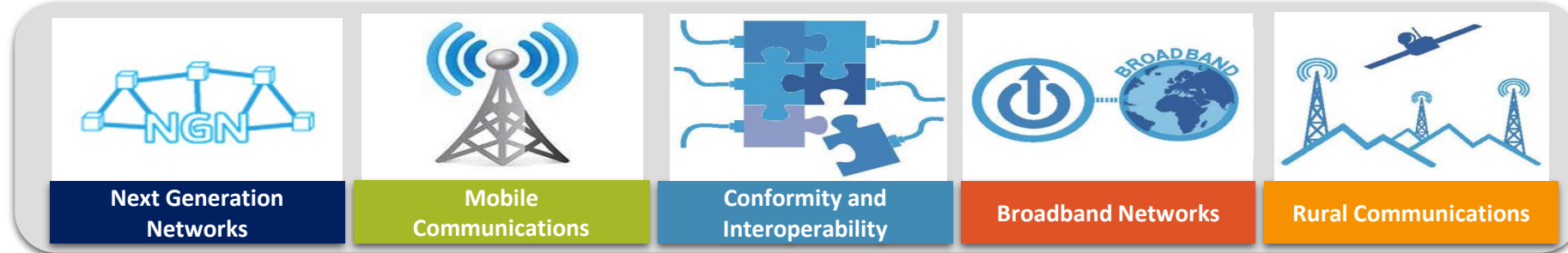


Least Developed Countries & SIDS



ICT Statistics & Indicators

Next generation, mobile communications, broadband networks and rural communications



- **Next-Generation Networks:** assistance on planning, deployment, migration, interoperability, digitization and evolution of networks, network elements and applications (e.g case studies on implementing next-generation networks (NGN)).
- **Broadband Networks (wired and wireless technologies) IPv6 and Internet Exchange Implementations:** to provide broadband connectivity free or low cost digital access for schools, hospitals, underserved populations, e.g Broadband Wireless Network project for Africa. IXPs to reduce transmission costs, optimize Internet traffic, improve QoS, assistance with planning, implementation and development of national ICT broadband networks including promoting IXPs.
- **Rural communications:** provision of information on access and backhaul technologies and source of power supply, latest technologies and best practice, implementation of projects on public community broadband access points.

Spectrum management and digital broadcasting

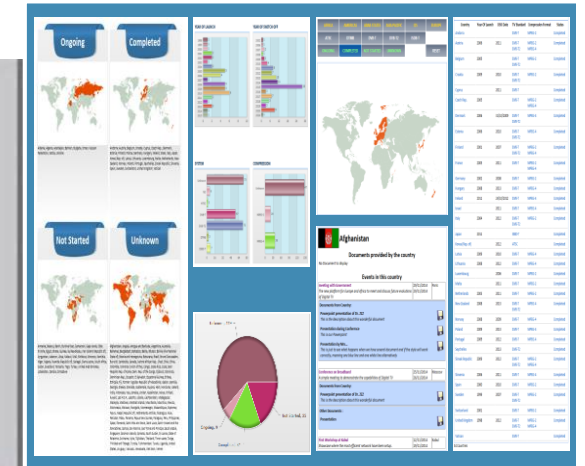
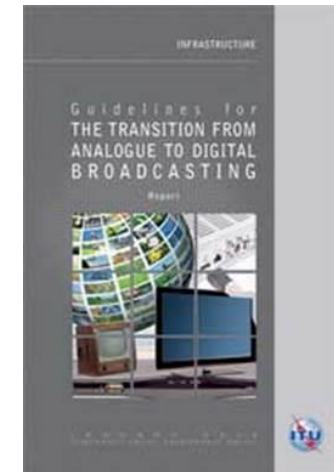
Spectrum Management Software (SMS4DC) has helped developing countries manage radio frequency and around 50 countries.

Guidelines:

- ✓ Spectrum Management Assessment,
- ✓ National Table of Frequency Allocations (NTFA) preparation,
- ✓ Spectrum monitoring
- ✓ Spectrum pricing.
- Assistance to more than 30 countries on NTFA preparation, SM assessment and cross-border frequency coordination.

Transition to digital terrestrial television broadcasting

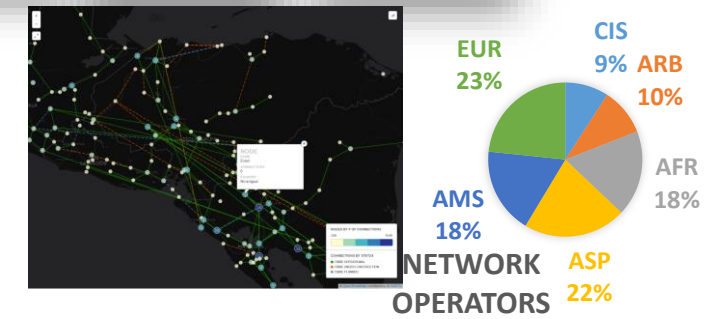
More than 40 countries have been assisted for transition Digital broadcasting transition (DSO) database



Interactive Transmission Map



- To achieve the SDGs, ITU is taking stock global ICT Infrastructure, and high-speed broadband links (Fiber Optic, Microwaves and Satellite Earth Stations).
- This tool presents information from 374 operator networks, 23 895 transmission links, and 16 266 nodes located in 157 countries. The research on the transmission links has reached 8 636 402 km of routes.



Policy and Regulatory Tools for Evidence Based Decision Making



ICTEYE

- ✓ *Knowledge Sharing Platforms and Strategic Dialogues*, in particular:
 - **The Global Symposium for Regulators (GSR)**
- ✓ *Cutting-edge data, research and publications for evidence-based decision making*, including:
 - **Global ICT Regulatory Outlook Report**
 - **ICT Regulatory Tracker**
 - **Various Thematic Reports and Portals**
 - **ICT Regulation Toolkit**
 - **ICT eye**



ITU Digital Ecosystem Portal



"To meet the expectations of a rapidly evolving digital ecosystem, policy makers and regulators need to adapt and develop more flexible, innovative and light-handed regulatory frameworks expanding beyond the traditional core telecom sector to take into account the multi-facet and multi-stakeholder dimensions of the digital world."
Mr Brahim Sanou, Director,
ITU Telecommunication Development Bureau (BDT)

ICT Regulation Toolkit

A global resource for policy-makers, regulators, the telecom industry, and consumers.

ITU Development Sector

eHealth - Be he@lthy, be mobile



The graphic shows a mobile phone screen with the following content:

- Header: mHEALTH FOR NON-COMMUNICABLE DISEASES (NCDs) INITIATIVE
- Icons for Cancers, Cardiovascular Diseases, Diabetes, and Respiratory Diseases.
- Large text: **BE HE@LTHY BE MOBILE**
- Footer: MOBILE TECHNOLOGY FOR A HEALTHY LIFE

Below the phone screen, the text reads:

**ITU-WHO
Mobile Health initiative**

Using mobile phones to increase access to health services

www.who.int • mhealth4ncd.itu.int

Logos for the European Union, World Health Organization, and ITU are displayed at the bottom.

Specific initiatives on Non-Communicable Diseases (NCDs):

- mCessation (tobacco use)
- mDiabetes (healthy eating habit)
- mHypertension (healthy life habit)
- mCancer
- The EU mHealth Hub (Best practices on mHealth)

Cybersecurity

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 Establishment
- 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

Digital Inclusion Initiatives



1. Empowering Women & Girls with ICT

- Girls in ICT Day Campaign:
Promote ICT studies to girls and young women before they make their university education decisions;

#GirlsInICT¹

68.4M people reached

Twitter Accounts

½ billion reached

2. ICT Accessibility for Persons with Disabilities

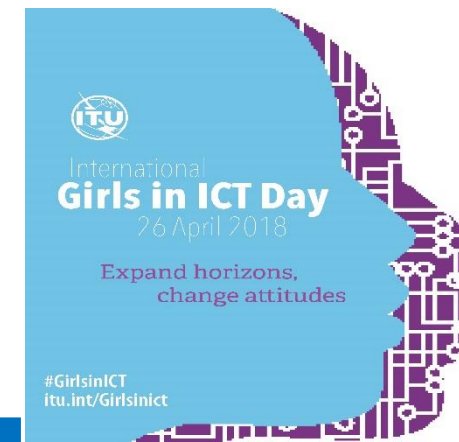
- Key Resources and Guidelines:
 - ITU Model ICT Accessibility Policy
 - ITU Training in Web Accessibility and public procurement of accessible ICTs

Girls in ICT Portal and Facebook page

391,259 page views

3. ICT skills for youth employment and entrepreneurship

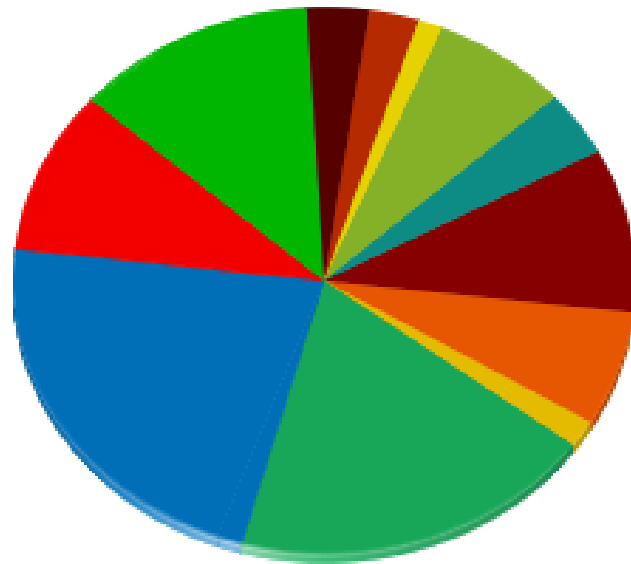
- *ITU-ILO Digital Skills for Decent Jobs for Youth Campaign to train 5 million young people with job ready digital skills*
- *Digital Skills Strategy Toolkit*
- *Training programme for universities, tech entrepreneurs and other stakeholders interested in launching their own coding bootcamps;*



ITU projects around the world



Areas of Action



- Capacity Building
- Cybersecurity
- Emergency Telecommunications
- Innovation
- Least Developed Countries & SIDS
- Spectrum management and digital broadcasting
- Climate Change
- Digital Inclusion
- ICT Applications
- ICT Statistics & Indicators
- Regulatory & Market Environment
- Technology & Network Development

64 Ongoing projects
As of today

\$70 Million valued
in ongoing projects

245
Projects since 2007

150
Beneficiary Countries



ITU's project portfolio consists of projects in a wide range of areas of action. ITU projects are being implemented in all six regions of the world.

ONGOING

Regional Center ICT Accessibility for Persons with Disabilities

ONGOING

Advisory Services to Saudi Arabia's Communication and Information Technology Commission (CITC)

ONGOING

Asesorar y apoyar al MinTIC en el desarrollo de actividades generales para la mejor utilización de las TIC para la Transformación Digital

ONGOING

Assistance for the Establishment of National Spectrum Management basic framework systems

ONGOING

Basic National Spectrum Management System

ONGOING

Broadband Wireless Network - Burkina Faso

ONGOING

Broadband Wireless Network - Eswatini

ONGOING

Broadband Wireless Network - Mali

ONGOING

Broadband Wireless Network in Africa

ONGOING

Broadband Wireless Network in the Kingdom of Lesotho

ONGOING

Capacity Building on an ICT centric innovation ecosystem

ONGOING

Capacity Building through Centres of Excellence (CoEs)

ONGOING

CIRT Implementation of CIRT Services and related capabilities

ONGOING

Coding Camps and ICT training for Young Girls in Africa - Phase 1





ONGOING	Communications CIRT Establishment	ONGOING	Enhancement of National Emergency Telecommunication Plans and Coordination to Save Lives
ONGOING	Connect a School, Connect a Community Initiative in the State of Palestine Project II	ONGOING	Establishment of a Cybersecurity Innovation Centre for the Arab Region
ONGOING	Cybersecurity in Pacific Island Countries	ONGOING	European mHealth Knowledge and Innovation Hub
ONGOING	Delivery of the Spectrum Management Training Program (SMTP)	ONGOING	Extension of Telemedicine to cover remote Areas in Zimbabwe
ONGOING	Desarrollo del conocimiento en tecnologías, para especialistas del ICE	ONGOING	Financial Inclusion Global Initiative (FIGI)
ONGOING	Development of a toolkit for ICT innovation policy/governance and ICT innovation ecosystem	ONGOING	Fostering development of infrastructure to enhance digital connectivity in Asia-Pacific
ONGOING	Development of a toolkit for ICT innovation policy/governance and ICT innovation ecosystem-II	ONGOING	Further developments to Spectrum Management System for Developing Countries (SMS4DC) software
ONGOING	Development of collaboration platform to foster affordable access to international optical fiber infrastructure	ONGOING	Global e-waste statistics project 2019
ONGOING	Development of Satellite Communications Capacity and Emergency Communications Solutions for the Pacific Islands	ONGOING	Global e-Waste Statistics 2018
ONGOING	Digital Identity for Development	ONGOING	Harnessing ICTs to support the digital economy and an inclusive digital society
ONGOING	eMCM Master of Communications Management	ONGOING	ICT Cooperation and partnership-TRA-UAE
ONGOING	Emergency Telecommunications in Asia and the Pacific	ONGOING	ICT-Eye: keeping an eye on ICT data
ONGOING	Enabling policy and regulatory environment in Asia-Pacific	ONGOING	Implementing the Climate Change Adaptation Component of the Satellite Communications, Capacity, and Emergency Communications Solutions Project for the Small Island Developing States of the Pacific



ONGOING International Research, Development and Testing Centre for new equipment, technologies, and services (IRDTC) - Phase 1

ONGOING m Health for Strengthening National Diabetes Prevention and control in Tunisia

ONGOING Mainstreaming ICT Applications for SDG

ONGOING mHealth for NCDs Joint Programme

ONGOING Monitoreo del Espectro Radioelectrico

ONGOING National CIRT Establishment in Burundi

ONGOING National CIRT Establishment in The Gambia

ONGOING National Implementation of the Financial Inclusion Global Initiative (FIGI) - Mexico

ONGOING National Implementation of the Financial Inclusion Global Initiative (FIGI) in China

ONGOING National Spectrum Management Assistance Workshop

ONGOING New graphical interface of the ITU Interactive Transmission Maps

ONGOING PRIDA-ITU Delegation Agreement for Action

ONGOING Project for the use of ICTs in emergency and disaster situations in the Caribbean region- Phase 1

ONGOING Proyecto piloto para el uso de las TIC para situaciones de emergencia y desastres en la región de las Américas

ONGOING Reforma a la Ley General de Telecomunicaciones de la Republica Dominicana (INDOTEL)

ONGOING Regional E-waste Monitor for the Arab Region

ONGOING Réseau hertzien large bande de Madagascar

ONGOING Rural Telecommunications Development in Least Developed Countries

ONGOING Saudi Arabia - CITC - Framework Cooperation Agreement in the areas of Cooperation and partnership on ICTs

ONGOING SET-UP IPv6 and IoT EXPERTISE CENTRE

ONGOING Smart Groundwater Management

ONGOING Support the Implementation of National Telecommunications Agency (ANATEL, Brazil)

ONGOING Universidades argentinas en la UIT

ONGOING Using Digital Health Services to accelerate SDG in the Africa Region in the context of Regional Initiative 1 (AFR1) -



AFR1: Building digital economies and fostering innovation in Africa

AFR2: Promotion of emerging broadband technologies

AFR3: Building trust and security in the use of telecommunications/information and communication technology

AFR4: Strengthening human and institutional capacity building

AFR5: Management and monitoring of the radio-frequency spectrum and transition to digital broadcasting





AMS1: Disaster risk reduction and management communications

AMS2: Spectrum management and transition to digital broadcasting

AMS3: Deployment of broadband infrastructure, especially in rural and neglected areas, and strengthening of broadband access to services and applications

AMS4: Accessibility and affordability for an inclusive and sustainable Americas region

AMS5: Development of the digital economy, smart cities and communities and the Internet of Things, promoting innovation

ITU Development Sector





ARB1: Environment, climate change and emergency telecommunications

ARB2: Confidence and security in the use of telecommunications/information and communication technologies

ARB3: Digital financial inclusion

ARB4: Internet of Things, smart cities and big data

ARB5: Innovation and entrepreneurship





ASP1: Addressing special needs of least developed countries, small island developing states, including Pacific island countries, and landlocked developing countries

ASP2: Harnessing information and communication technologies

to support the digital economy and an inclusive digital society

ASP3: Fostering development of infrastructure to enhance digital connectivity

ASP4: Enabling policy and regulatory environments

ASP5: Contributing to a secure and resilient environment





CIS1: Development of e-health to ensure healthy lives and promote well-being for all, at all ages



CIS2: Use of telecommunications/information and communication technology to ensure inclusive, equitable, quality and safe education, including the enhancement of women's knowledge of information and communication technologies and e-government **CIS3:** Development and regulation of infocommunication infrastructure to make cities and

human settlements inclusive, safe and resilient

CIS4: Monitoring the ecological status and the presence and rational use of natural resources



CIS5: Fostering innovative solutions and partnership for the implementation of Internet of Things technologies and their interaction in telecommunication networks, including 4G, IMT-2020 and next-generation networks, in the interests of sustainable development

ITU Development Sector



EUR1: Broadband infrastructure, broadcasting and spectrum management

EUR2: A citizen-centric approach to building services for national administrations

EUR3: Accessibility, affordability and skills development for all to ensure digital inclusion and sustainable development

EUR4: Enhancing trust and confidence in the use of information and communication technologies

EUR5: Information and communication technology-centric innovation ecosystems



Capacity Building

- Governments
- Private sector
- Academic institutions
- Centers of Excellence
- International and regional organizations



ITU's work on ICT statistics

1. ICT Development Indicator (IDI)
2. Data collection and dissemination
3. Data analysis and research reports
4. Monitoring global ICT targets
5. Develop definitions and methodologies for ICT indicators
6. Foster International cooperation
7. Capacity building
8. Big Data for Measuring the Information Society

ICTEYE



Innovation

Key Products and Services as an ITU Goal



Innovation Frameworks

- **Scalable approach** through toolkits/ frameworks



Innovation Capacity building

- **Innovation ecosystem development skills** through series of training and certification of national experts



Customized assessments

- **Foster digital innovation and entrepreneurship** through national experts or ITU



National, regional or global projects

- Based on customized **assessment outcome, bankable projects** identified & developed



Knowledge Sharing

- **Good practices** sharing through **regional innovation forums**, global innovation, workshops, reports, etc.

ITU plans to set up its first ever Innovation Centre in India



Standards and Patents



Standards are set for the public good.
Their nature is potentially global.
Accessibility and ownership issues increasingly debated.

Patents offer temporary exclusive rights that exclude others from use of the technology or license.

ITU Licensing declaration options:

Option 1: Free of Charge license to an unrestricted number of applicants on a worldwide, non-discriminatory basis

Option 2: Prepared to grant a license to an unrestricted number of applicants on a worldwide, **non-discriminatory basis and on reasonable terms and conditions**

Option 3: Unwilling to grant licenses

Cooperation is what brings us here today.



Cooperation, coordination and collaboration are at the heart of the 2030 Agenda for Sustainable Development, which will shape our digital future.



Cross-Sectoral Multi-stakeholders Partnership & Membership



Thank You!