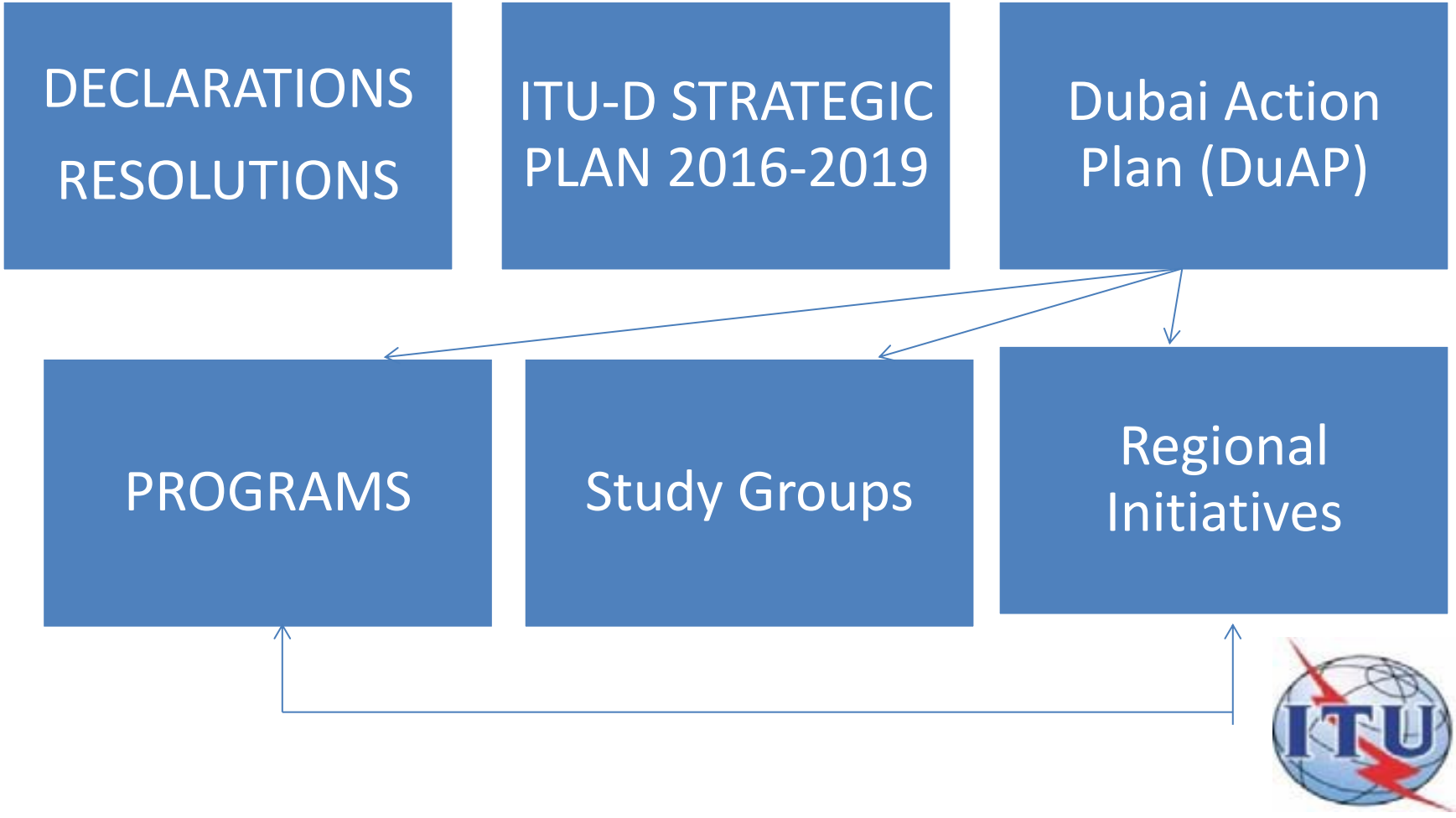

Kigali, Rwanda 5 December 2016

# Session 1

# Regional Initiatives for Africa

# WTDC 14
# Dubai, UAE 30 March – 10 April 2014



# AFRICA REGIONAL INITIATIVES

**AFR1:** Strengthening human and institutional capacity building

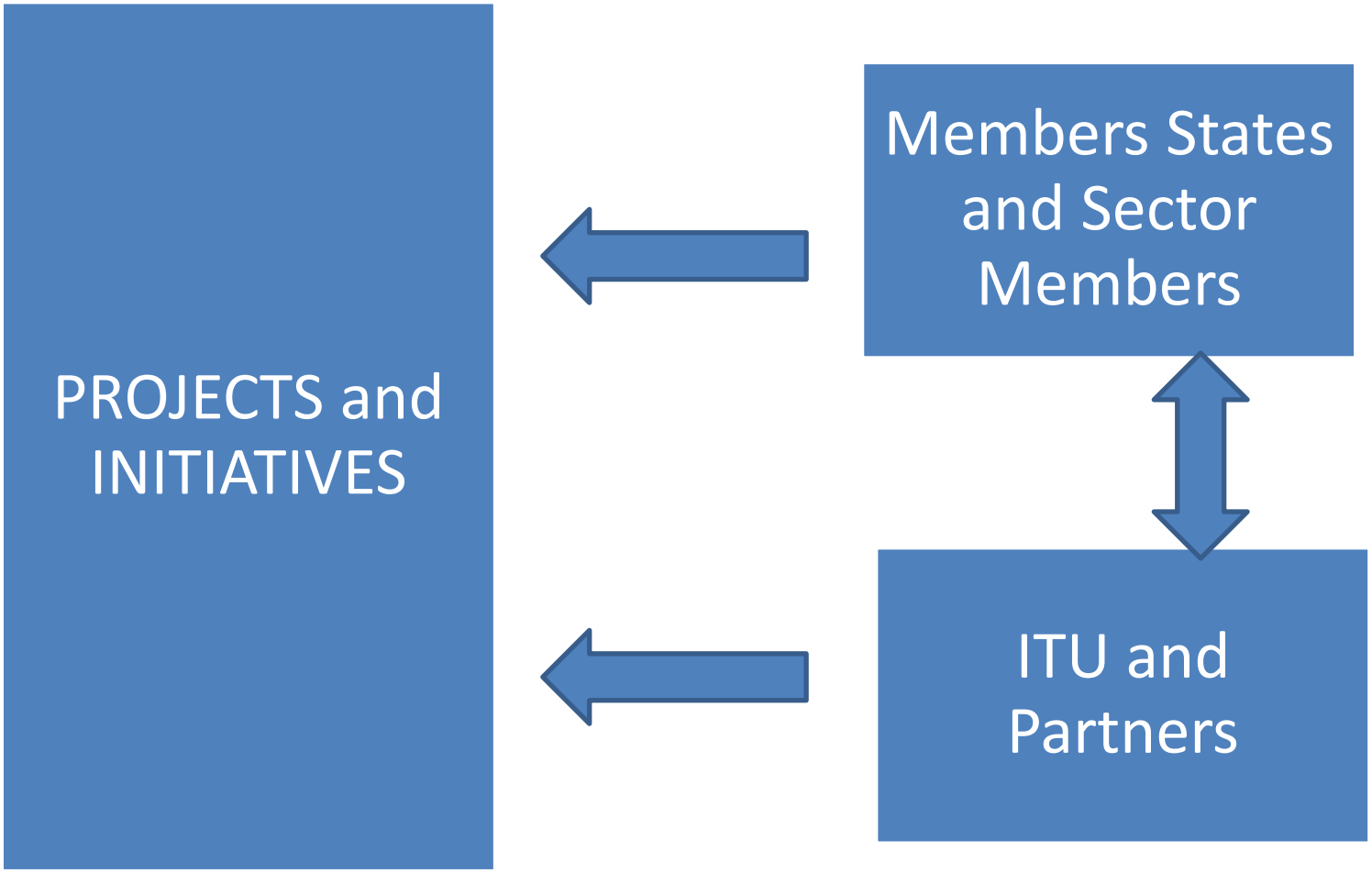
**AFR2:** Strengthening and harmonizing policy and regulatory frameworks for the integration of African telecommunication/ICT markets

**AFR3:** Development of broadband access and adoption of broadband

**AFR4:** Spectrum management and transition to digital broadcasting

**AFR5:** Building confidence and security in the use of telecommunications/ICTs

# AFR RI IMPLEMENTATION




Regional initiative 1
Strengthening human and
institutional capacity building

## OBJECTIVE

To provide stakeholders in Africa, on a sustainable basis, with human resources and skills needed for harmonious development of the telecommunication/ICT sector.

# Expected results (10)

1) Enhanced skills and human capacity in the design and development of telecommunication/ICT strategies, including conformity and interoperability

2) Increased local expertise through cooperation between countries

3) Increased access to training resources, including training manuals, for all stakeholders in the African telecommunication/ICT sector

4) Promotion of technical cooperation between telecommunication /ICT training institutions in regard to capacity and resources

5) Increased availability of public access to knowledge, in particular by raising public and consumer awareness.

6) Forums for exchanging and sharing information between the various groups having a stake in the telecommunication/ICT sector in Africa, in particular young people, women and persons with disabilities and specific needs

7) Enhanced human capacity building on legal aspects in order to address security and trust in the use of telecommunications/ICTs, particularly where cyberthreats are concerned.

8) Greater availability, development and usage of local content and languages, and corresponding webpage development

9) Improved specialized skills development to meet the ICT needs of persons with disabilities and specific needs in order to promote ICT usage, particularly in regard to Internet applications

10) Promotion of research and development (R&D) in African countries.

# IMPLEMENTATION/ACHIEVEMENTS

Workshops

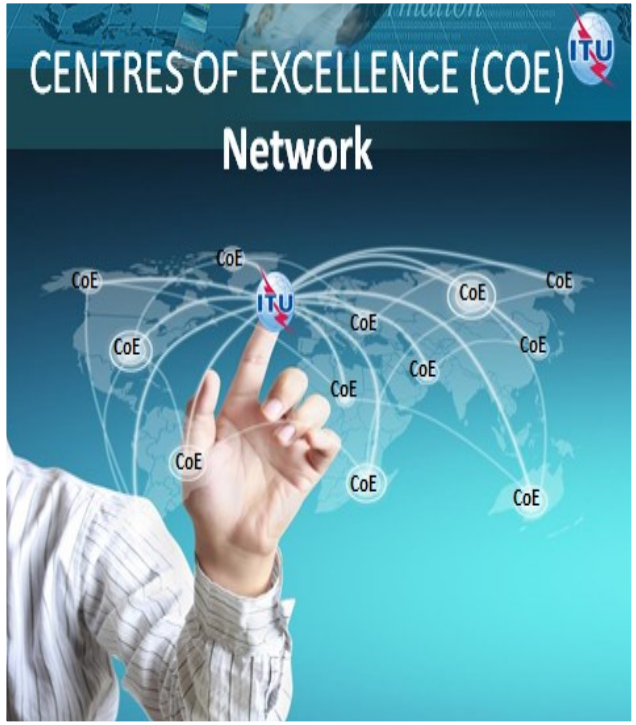
Global Events

Other RIs

ITU **A**cademy

CoE Network

National/Regional Educations and Training Institutions



# Centers of Excellence
# Selected for AFRICA Region for 2015-2016 according to WTDC-14 –Resolution 73

| # | Priority Areas Recommended | Recommended Institutions | Country |
|---|---|---|---|
| 1 | **Policy and Regulation** | **Digital Bridge Institute(DBI)** | **Nigeria** |
| | | | |
| 2 | **Broadband Access & Digital Broadcasting** | **Ecole Supérieure Multinationale des Télécommunications (E.S.M.T)** | **Senegal** |
| | | | |
| 3 | **Cyber security** | **ESATIC** | **Ivory Coast** |
| | | | |
| 4 | **Cyber security** | **University of Rwanda, College of Science and Technology** | **Rwanda** |
| | | | |
| 5 | **ICT Applications and Services** | **Centre for Learning, Telkom SA** | **South Africa** |
| | | | |
| 6 | **Broadband Access & Spectrum Management** | **AFRALTI** | **Kenya** |

# Training Delivery Through Partnerships

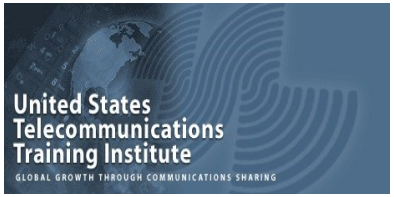
**Some of our Partners**










# New Partnerships



**ITU and AFRALTI**

- Spectrum Management

**ITU and ARCTEL**

- Management for regulators in ICT

**ITU and DIPLO**

- Internet Governance

ITU and Cisco (Extension)

- IoT

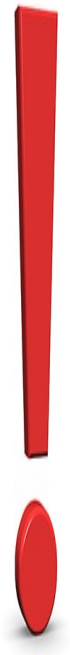
SMART AFRICA SCHOLARSHIP FUND

# Challenges



**The 3rd Steering Committee was held in Abuja, Nigeria 8-10 November 2016** identified following issues:

- Still most courses marketed through the ITU platform are face to face. Few ONLINE courses marketed and/or delivered.
- The available rich training functionalities of the platform are still not fully utilized as most CoE's use the platform for marketing courses only.
- CoE need ITU support to market courses in the region and elsewhere.
- Market needs assessment to align the courses with the demand from the industry.



# Conclusions



CEoE are an excellent medium to strengthen the human and institutional capacity in Africa

ITU online platform should be used more to deliver online course to reduce the cost of delivery

Marketing competence of CoE should be enhanced

More partners in development and delivery of specialized content should be identified

Several Workshops and Specialized training provided outside CoE Network.

## Regional initiative 2

# Strengthening and harmonizing policy and regulatory frameworks for the integration of African telecommunication/ ICT markets

# OBJECTIVE

**To facilitate and promote the reform of Africa's national telecommunication/ICT sectors and the implementation of telecommunication/ICT strategies in order to achieve subregional and regional integration of telecommunication/ICT infrastructure, services and markets.**

## Expected results (10)

1)Implementation of the reference framework for harmonization of telecommunication/ICT regulatory policies in Africa

2)Development of competitive African telecommunication/ICT markets

3)Harmonized technical standards to provide increased connectivity of networks and services

4)Establishment of a harmonized policy to reduce the level of intra-continental traffic routed by extra-continental transit centres

5)Development of a harmonized strategy for universal access, taking into account the needs of young people, women, persons with disabilities and specific needs, and indigenous peoples

6)Development of high-quality and affordable telecommunication/ICT services

7)Establishment of a regional framework for cooperation (training, internships, mutual assistance) on e-waste

8) Development and harmonization of national and regional regulations on cybersecurity and ICT applications

9)Harmonization of the quality-of-service regulatory framework at regional level to ensure consumer satisfaction

10)Development of a set of tools and mechanisms for measurement of a consumer satisfaction index.

# Achievements

- Guidelines for the development of a national broadband plan (NBP) and a model national broadband plan were elaborated for countries of the Southern African Development Community (SADC). Following the recommendation from the validation workshop held from 1st to 5th June 2015 in Windhoek, Namibia, the SADC countries adopted the proposed Guidelines and NBP model during the SADC ICTs Ministers meeting held in Namibia, on 23-26 June, 2015. This meeting facilitated the transposition of the model into National Broadband Plans.
- From 2014 to 2015, direct assistance continued to be provided to South Sudan to operationalize its National Communications Authority (NCA) and the setup of a new Board.
- Strengthened the African Least Developed Countries (LDC) capacities in telecommunication/ICT standardization and in statistics. National workshops were held in Gabon and Madagascar, with 25 participants each, which provided an increased understanding on ICT Indicators and data collection.

# Achievements

- Workshops were conducted in Economic Community of Central African States (ECCAS) to harmonize national ICT policies and regulatory frameworks. This resulted in the drafting of a Models Set of Laws which are awaiting transposition into national legislations of requesting countries.
- ITU assisted the Republic of Namibia and the Kingdom of Swaziland in developing their respective NBP, using the guidelines and model developed in 2015. This assistance resulted in the adoption by both countries of the NBPs, following the validation exercise that took place in Namibia, on 27th February 2016 and Swaziland, on 24th May 2016.
- ITU assistance provided to Rwanda, laid the foundation for new ICT bills, a secondary legislation and the creation of new specialized Regulatory Agencies (Frequencies and ICT). Similar assistance has also been provided to Cameroun, Guinee Equatorial and Togo.

# Challenges

- Lack of clear legal and regulatory policies on emerging issues e.g. OTT, IoT, Big Data, etc.
- Harmonization of policies at all sub-regional levels

# Conclusion

- Harmonized policy and regulatory frameworks are key to trade and investment in Africa and great improvement has been achieved
- To embrace emerging technologies, African countries should study and create an enabling environment by continuing to harmonize laws and policies across borders


Regional initiative 3
Development of broadband access and adoption of broadband

# OBJECTIVE

To assist Member States in the development of broadband infrastructure and access thereto in urban and rural areas, with particular emphasis on subregional and continental interconnection

**Expected results (10)**

1) National telecommunication/ ICT master plans to meet the requirements of developing countries

2) Improved broadband backbone infrastructure and access to affordable telecommunication/ICT services in urban and rural areas

3) Guidelines on rural connectivity, including policy, appropriate technologies and power supply issues, and best practices

4) Enhanced human capacities in the area of broadband communication networks

5) Interconnection of countries by means of high-capacity links, including access to undersea cables for landlocked countries, as part of the follow-up to the Connect Africa summit

6) Development of mechanisms and tools to facilitate the use of ICTs by persons with disabilities and specific needs

7) Ease of access to submarine cables for all countries, and especially landlocked countries, on fair terms

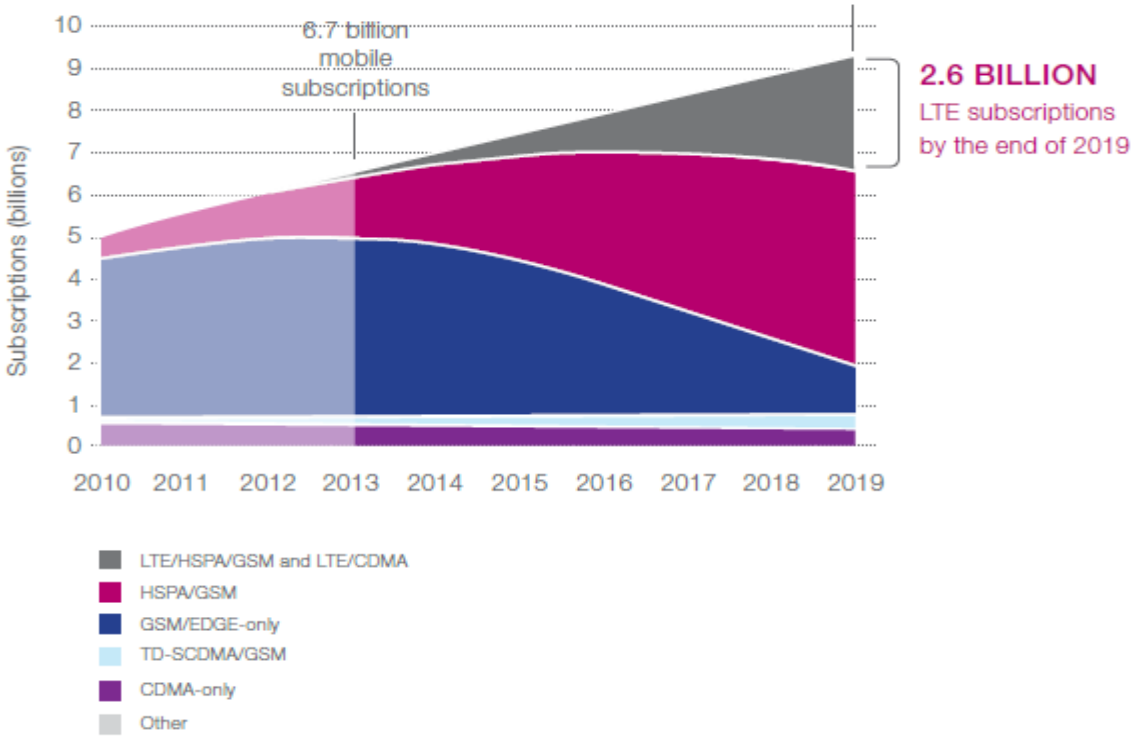
8) Promoting the establishment of national and regional Internet exchange points (IXPs)

9) Promoting the development of local content and localized access

10) Promoting IPv4 to IPv6 migration.

# Global trends for broadband

**Forecast for broadband mobile technologies subscription**



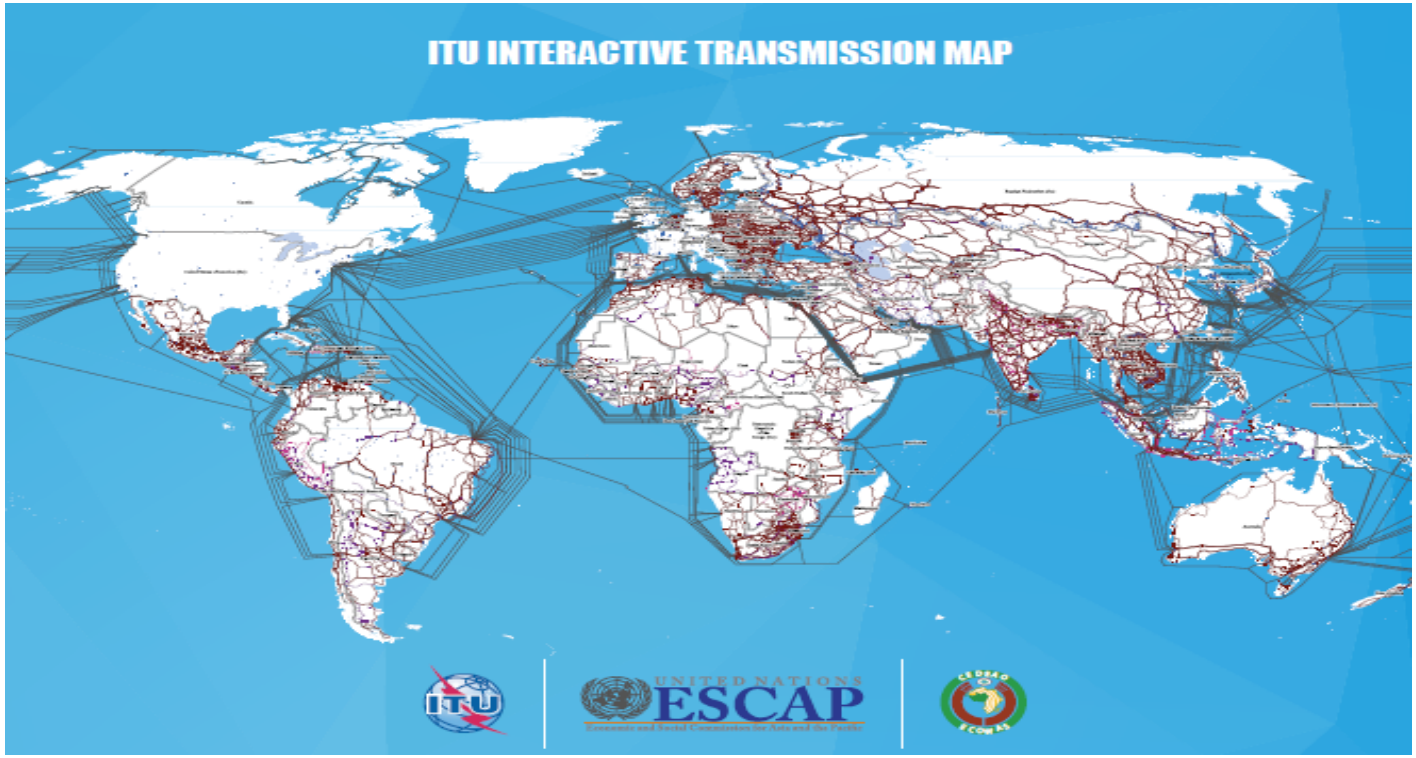
# Achievements (1)

- The ITU/McCaw foundation broadband wireless project for Africa (budget USD 6.4 million):
  - Targeting the deployment of broadband wireless networks in the following countries: Burkina, Burundi, Djibouti, Mali, Lesotho, Rwanda, and Swaziland
  - Aiming at providing free of charge or low cost connectivity to schools, hospitals, and underserved populations in rural and remote areas in selected countries
  - Aiming at promoting the development of ICT applications for the connected entities

- Implementation status:
  - Successfully implemented: Burkina Faso, Burundi, Djibouti
  - Ongoing: Lesotho, Swaziland and Rwanda
  - Planned: Mali

# Achievements (2)

- Digital interactive terrestrial network maps for Africa:
  - Implemented for most operators from most African sub regions
  - Aiming at providing detailed and accurate information on broadband transmission networks in Africa
  - Public version accessible through http://www.itu.int/itu-d/tnd-map-public/
  - Need of a TIES account for validation process



# Achievements (3)

- Master Plan for Wireless Broadband Access in Africa (ITU-Korea Project; budget CHF 379,668):
  - Survey results on the status of the broadband connectivity in general and wireless broadband access in Africa region
  - Collection of information on development of appropriate policies, regulations and capacity building, including licensing, and planning for deploying wireless broadband access networks, from Guidelines and Recommendations developed by ITU
  - Development of Broadband Wireless access Master Plans for at least 2 and up to 4 selected countries in the Africa Region (within the limit of budget)
  - Enhancement of skills through training for making wireless broadband access master plans
- Implementation status:
  - Countries covered: Congo Brazza, and Malawi
  - Initiated: in South Sudan

# Achievements (4)

- Distribution of a newly developed ICT infrastructure sharing and access framework and the guidelines adopted by SADC Members in March 2016. This supported countries in the implementation of their infrastructure sharing policies.
- ITU prepared and shared a case study of the One Network Area (ONA) roaming framework for the East Africa Northern Corridor countries, which was adopted as a benchmark for roaming in Africa.
- Assisted Burundi in the development of broadband policy, strategy and regulatory framework.
- A broadband universal access study was conducted for the Kingdom of Lesotho, which provided strategic guidance in the implementation of the universal broadband strategy and the overall development of their ICT sector.

# Achievements (5)

- In August 2014, assistance to Lesotho in National Broadband Policy
- ITU assisted CRASA (Communications Regulatory Association for Southern Africa) in Broadband plans
- Assistance to Namibia and Swaziland with their National Broadband Policies including implementation strategies and action plans
- Study in Lesotho for Universal Access to Broadband assessing the balance of supply and demand sides so as to focus efforts and investments in areas and communities including identifying suitable and effective strategic programs to achieve universal broadband in the country. The study is in the final stage.

# Conclusion

- The potential for Broadband to positively impact Africa's social economic development is very high
- The is still great need for Broadband infrastructure especially in rural and remote areas
- There is need find ways to make Broadband access affordable
- To increase use of Broadband, there is need for local content


# Regional initiative 4

# Spectrum management and transition to digital broadcasting

# **Objective**: To assist Member States in the transition to digital broadcasting and spectrum management

**Expected results**:

- 1) Support for the elaboration of spectrum-management plans at the national, regional and global levels, including the transition to digital broadcasting.
- 2) Assistance in using the tools to support the developing countries in improving the international coordination of terrestrial services in border areas.
- 3) Capacity building in spectrum management and digital broadcasting technologies.
- 4) Elaboration of studies, benchmarks and guidelines on the economic and policy aspects of the assignment and use of the radio-frequency spectrum, taking into account Resolution 9 (Rev. Hyderabad 2010).
- 5) Assistance to countries in fostering people-inclusive strategies in digital broadcasting, to include the availability of universal broadcasting receivers for commercial use at affordable prices.
- 6) Assistance to Member States in meeting the deadline for the analogue-to-digital switchover.

# Transition to digital TV broadcasting

- Moving from analogue to digital terrestrial television frees up scarce spectrum for other uses, especially mobile and mobile broadband.

- The deadline of June 2015 set for the UHF band by the ITU Regional Radiocommunication Conference in Geneva in 2006 (RRC-06) for the migration from analogue terrestrial television to digital terrestrial television applies to Africa, the Middle East and Europe, as well as to the Islamic Republic of Iran.( ITU-R Region 1)

# Transition to digital TV broadcasting

- National Administrations have worked together on a bilateral and multilateral basis to develop spectrum plans for digital terrestrial television.
- 4 Digital Migration summits have been organized by ATU and ITU .
- Workshops devoted to Spectrum management and Harmonization of calculations methods at the borders
- Workshops for notifications and assignations
- Africa Spectrum Conference was held in November 2016 in Dakar followed by a workshop on DTT funding mechanisms.(reports available in FR/EN)

# *Website*

**DSO Data base**

- Summary of the basic information from countries
- Relevant events and Publications(e.g. workshops, frequency coordination meetings, seminars, ITU-R and ITU-D documents, roadmaps)
- Relevant websites (e.g. ITU-R and ITU-D, broadcasting organizations, GE-06)
- Contacts and Information sources (list of relevant surveys, questionnaires of the ITU-D and ITU-R and other sources)
- Accessible both form BDT and BR web pages

*Circular Letter BDT/IEE/SBD/DM/014 from the BDT Director (23 February 2015)*

- Given the dynamically changing status of the Digital Terrestrial Television (DTT) deployment and in order to enable all administrations to benefit from the latest status and information concerning the Digital migration, **Administrations are invited to make the necessary update to ensure that their actual status and data are correctly reflected on the portal.**
- http://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Pages/DSO/Default.aspx

# ITU Broadcasting /Spectrum Management Projects for AFRICA

**ITU-KCC-MSIP ( Korea)** : Roadmap for Transition from Analogue to Digital Terrestrial Television Broadcasting in, **Africa,** (countries selected by Korea)

**ITU-BDT**: Roadmaps for Transition from Analogue to Digital Terrestrial Television Broadcasting regular planned activities

- 12 countries assisted (3 in each sub-region)

**SPECTRUM MANAGEMENT**

- Harmonization of calculation method at the borders approved (HCM4A)

-SMS4DC, Training for trainers made Version 5 of the software . 12 trainers are now available to assist countries for national needs.

# Remaining Challenges since the End of the Transition period

**Except for the countries listed in footnote 7 of Article 11 of the GE06 Agreement:**

## ➢GE06 Plan

- All analogue assignments have been deleted from the Plan
- All Plan remarks with respect to analogue have been removed
- GE06 provisions are not applicable anymore to Analogue assignments.

## ➢MIFR:

- Administrations were asked to confirm their decision to delete or keep the analogue assignments in the MIFR, knowing that they will be kept with unfavorable findings to 11.34. i.e., not causing any interference nor claiming protection.

**Countries are Urgently Invited to Register to MIFR !!!**


Regional initiative 5
Building confidence and security in the use of telecommunications/ICTs

# OBJECTIVE

**To assist Member States in defining and implementing appropriate strategies for the protection of ICT infrastructure and building confidence in the use of ICTs and applications.**

**Expected results (7)**

1) Enhanced coordination and sustained national and regional approaches to cybersecurity

2) Support for institutional and organizational mechanisms at national and regional levels to effectively implement cybersecurity strategies

3) Development of appropriate measures to protect consumers, children and other vulnerable persons in the use of ICTs

4) Creating awareness of cyberthreats, cybersecurity measures and quality of service in the use of ICTs

5) Adoption of measures for privacy and personal data protection

6) Promoting the development of national and regional computer incident response teams (CIRTs)

7) Development of a harmonized strategy to strengthen information security and combat spam and cyberthreats.

# GCA: From Strategy to Action

**Global Cybersecurity Agenda (GCA)**

## 1. Legal Measures

- ITU Cybercrime Legislation Resources
- Publication on Understanding Cybercrime: A Guide for Developing Countries **(new edition: November 2014)**
- HIPSSA, HIPCAR, ICB4PAC Projects (executed with EU)
- MoU with UNODC for assistance to Member States

## 2. Technical and Procedural Measures

- ITU Standardization Work: ITU-T SG 17
- ITU-R recommendations on security
- ICT Security Standards Roadmap
- ITU-T JCA on COP

## 3. Organizational Structures

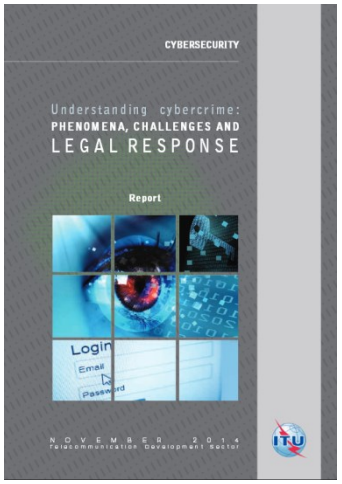
- National CIRT deployment and cooperation
- Regional Cybersecurity Centres (RCCs)
- Regional and International Cyber Drills

## 4. Capacity Building

- ITU National Cybersecurity Strategy Guide
- Global Cybersecurity Index (GCI)
- Cyberwellness Profiles
- Technical assistance and projects in LDCs
- Elaboration of Best Practices at ITU-D SG 2 Q3/2
- Regional Cybersecurity Workshops
- Training for high-level Member State officials

## 5. International Cooperation

- ITU's Child Online Protection (COP) Initiative
- Collaboration with other IGOs and Private Sector
- UN-wide Coordination Mechanisms




**New edition 2014: ITU Publication on UNDERSTANDING CYBERCRIME: Phenomena, Challenges and Legal Response**

The Guide serves to help developing countries **better understand the implications related to the growing cyber-threats** and assist in the assessment of the current legal framework and in the establishment of a sound legal foundation.

THE WORLD BANK

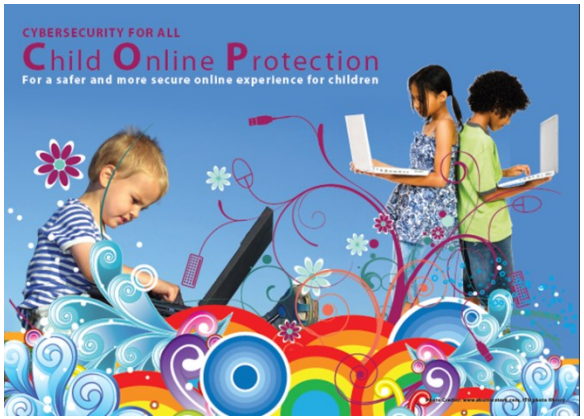
**COMBATTING CYBERCRIME: TOOLS AND CAPACITY BUILDING FOR EMERGING ECONOMIES**

Joint project **among several partners under the coordination of the World Bank to build capacity** in developing countries in the policy, legal and criminal justice aspects of the combat against “cybercrime

# National Strategies


- Developing **comprehensive and efficient National Cybersecurity Strategies** is fundamental for building a secure ICT ecosystem.
- A new reference tool being planned

- ITU together with its partners helps countries organize **Child Online Protection Strategy Framework workshops** to assist national stakeholders in planning and deploying an effective and practical approach to COP at a national level.



# Achievements: CIRT & COP Programmes in Africa


- CIRT:
  - Assessments conducted for about **28** African countries
  - Implementation for about **10** African countries (2 underway)
  - Implementation in progress for Burundi
  - First Cyber drill conducted in Zambia end of September 2014 with participation of over **16** countries and AFRICACERT Team
  - Second Cyber drill conducted in Rwanda in May 2015 with participation of more than **150** participants from **18** countries
  - Third Cyber drill conducted in Mauritius in April 2016 with participation of more than **150** participants from **17** countries
- COP: ITU COP Guidelines
  - Development of an **operational framework for COS** national policies/strategies and formulation of national priority projects
  - Support to Member States for the **elaboration of COS national policies** and for formulation of national priority projects.

# Challenges

- Awareness raising: e.g. decisions makers, users, technical actors, children
- Funding issues: need to put in place funding mechanisms for cybersecurity
- Capacity building: need to create a critical mass of actors able to address cybersecurity/COP related issues
- Putting in place national cybercrime/COP legislations
- Putting in place a harmonized regional cybercrime/COP legislation
- International cooperation: create a synergy of actions among actors: ITU, FIRST, AfricaCERT,…
- Follow-up: strong mechanisms to be put in place


# CONCLUSIONS

There was tremendous progress in the provision of ICT services in Africa specially using mobile technology and efforts to build confidence and security in the use of Telecom/ICT should continue

# I Thank you!