



ITU REGIONAL DEVELOPMENT FORUM FOR AFRICA

Report by the Chairman

Draft

Accra - Ghana

18-20 JULY 2018

The Regional Development Forum for Africa (RDF-Africa) was successfully held from 18th to 20th July 2018 at the Accra International Conference Centre, Accra, Ghana with the theme “**ICT@SDGs: Towards the implementation of WTDC17 outcomes**”. In recall, RDF aims at sharing and discussing the achievements, experiences, work programs and partnerships amongst ITU Members and interested partners for effective implementation of the outcomes of the World Telecommunication Development Conference. The Forum was organized by the International Telecommunication Union (ITU) in collaboration with and at the kind invitation of the Ministry for Communications (MoC) of Ghana.

RDF-2018 witnessed the attendance of 216 participants among which were 8 ITU Staff, 104 Ghanaian (48.15 %) and 112 foreigner participants (51.85 %) from 29 countries and 27 organizations, sector members, academia and industry. This report gives the substance of the meetings held during RDF.

OPENING SESSION

The Forum was officially opened by Hon. Ursula Owusu-Ekuful, Minister for Communication of Ghana who delivered her Keynote Address. The opening ceremony also witnessed by the participation of Hon. Minister for Information of Ghana, Hon. Dr. Mustapha Abdul-Hamid, and the Deputy Minister for Communication, Hon. George Andah. Hon. Ursula Owusu-Ekuful emphasized the need for African countries to work on integrated resilient broadband infrastructure development, as a foundation for digital economy promotion on the continent. She also pointed out the excellent opportunities provided by ICT, in terms of rapid growth, value-added generation and job creation, particularly for a continent like Africa where 60% of the population is young (under 25 years old). Indeed, ICT is about innovation and cutting-edge technologies such as Blockchain, Artificial Intelligence, and Big Data positively impacting and shaping the development of other businesses and critical sectors like agriculture, health, education, and public administration in general through better productivity and efficiency. She concluded by expressing Ghana’s ambition to become the first African ICT market through the full appropriation of ICT and digital economy.

Prior to the opening by the Hon. Minister for Communication, Mr Joe Anokye, Director General of the National Communications Authority (NCA) the first speaker of the opening ceremony delivered a welcoming address on behalf of the host country. He welcomed all participants to Ghana for RDF-2018 and expressed his appreciation to the ITU for having chosen Ghana to host the event. He highlighted the importance of RDF as a platform for all actors to come together to exchange best practices and experiences for the development of the ICT eco-system for a better digital economy uptake in Africa.

Mr. Brahim Sanou, Director, Telecommunication Development Bureau (BDT), was the next speaker in the session. He also welcomed all participants to RDF in his address and expressed the longstanding cooperation between ITU and Ghana and thanked the Ghanaian Authorities for their support to ITU activities, including the organization of RDF-2018. Mr Sanou emphasized the importance of Regional Initiatives (RIs) implementation as they are a good means to accelerate progress in all sectors of life, such as education, health, agriculture, energy, and transport. He explained further that Africa could make its communities smarter, empower women, youth and people with disabilities through the implementation of the RIs. He also stated that overall, RIs successful implementation will help put a human face on ICT. RDF constitutes a platform for Africans to interact with each other and with ITU in order to address all concerns pertaining to RIs implementation and brainstorm to come up with adequate solutions.

The opening session ended with the appointment of Mr Joe Anokye, Director General of National Communication Authority (NCA) of Ghana, as **Chair of RDF-2018**.



SESSION 1 –High level roundtable on boosting Digital Economy development in Africa

Session 1 of the forum was moderated by Mr. Andrew Rugege, ITU Regional Director for Africa and had five panelists: Ms. Fleur Regina Bessou (Cote d'Ivoire), Mr. Simon Cosmas Chigwamba , (Zimbabwe), Hon. Minister Ursula Owusu-Ekufu (Ghana), Dr. Isa Boateng (Ghana), and Mr. Balford Wetshi Koy Letshu (DRC). The session allowed participants to share experiences and expose visions for development of a digital economy in Africa.

The first contribution was from Hon. Minister Ursula Owusu-Ekufu who highlighted Ghana's vision on digital economy development on which the first thing is to secure reliable ICT infrastructure. In this regard she mentioned that Ghana is connected to 5 submarine cables and that the national telecom operator is providing broadband connectivity to end-users through technologies such as FTTx and 4G/LTE. She further indicated that National technology parks and start-ups are being promoted and are able to develop world-class applications such as e-ID systems, applications for tax traceability and collection as well as the Digital financial technology that is making its way throughout the country. In addition, big data is being utilized by the Government for planning purposes. She also informed the meeting that Ghana has joined the Smart Africa Alliance to consolidate its migration to digital economy process. The Hon. Minister's contribution was complemented by Dr. Boateng who addressed the importance of ICT as an enabler in all sectors of activity, and particularly for good governance and e-democracy. He explained to participants that ICT would enable the achievement of Africa Union 2063 agenda and the UN 2030 SDGs and remains the field of competence where Africa can easily compete with the rest of the world.

Other interventions followed the same logic of infrastructure development, connectivity to submarine cables to neighboring countries, human capacity building and skills development, promotion of a culture of cybersecurity and fight against fraud in the ICT sector, ICT accessibility and affordability, applications development for the digitalization of critical sectors such as health, education, agriculture, and administration. Overall, the development and promotion of digital economy has to be built around key actions such as reliable and sustainable infrastructure development, ICT accessibility at reasonable cost, good governance, mastery of data processing and management, cybersecurity and confidence in the use of networks and services, successful migration from analogue to digital broadcasting, human capacity building and promotion of technology parks. Africa cannot be transformed without digital transformation and it has the means and human capabilities to do so.

SESSION 2 – Setting the tone and lessons learned

Session 2 was moderated by Hon. George Andah, Deputy Minister for Communication (Ghana). The only speaker, Mr. Andrew Rugege, ITU Regional Director for Africa, delivered a presentation in which he stressed the objectives of the Regional Development Forum (RDF) as a platform enabling the ITU to present to the membership in the region the work done over the previous year and to seek guidance from membership and partners on activities planned for the following year. He then went through regional initiatives and their impact on SDGs achievements. He stated that based on the lessons learned from the implementation of the 5 regional initiatives for the period 2014-2017, (WTDC-2014), the Regional Initiatives should be implemented through a well elaborated set of National and/or Regional projects and that to ensure successful implementation of such initiatives, it is important that all stakeholders join forces with the ITU. He informed that RDF was one of the mechanisms that could facilitate a multi-stakeholder approach and of crucial importance to a successful rate of implementation

would be a clear definition of the frameworks, scope and funding mechanisms for the projects. He indicated that summary of the achievements of each RI reported shows that:

- Tremendous progress in the roll out of ICT Infrastructure including broadband, mostly through wireless and mobile technology has occurred in the region. However access to ICT services in rural areas is still a challenge that requires attention.
- Migration to DTT is still not achieved for 60% of countries (ASO). Resource mobilization is still a challenge.
- Partnerships with Private Sector, Member States, Int'l Orgs, Development Agencies, and Banks are needed for faster implementation of RIs.
- Resource mobilization and funding mechanisms need to be enhanced for better implementation. Well elaborated bankable projects are indispensable for the attraction of funding.

SESSION 3 – Delivering on Africa regional initiatives of WTDC-17

Session 3 was moderated by Mr. Andrew Rugege, ITU's Regional Director for Africa. The session put into perspective the outcomes of WTDC-17, the Buenos Aires Action Plan and the implementation of Regional Initiatives. The first speaker, Mr. Jean-Jacques Massima-Landji, ITU Area Representative for Central Africa and Madagascar presented the Buenos Aires Action Plan (Programs, Objectives, outcomes and outputs), Regional Initiatives, Projects and Study Groups.

The second presenter, Ms. Regina Fleur Assoumou (Cote d'Ivoire), Chair of ITU-D study group 1 presented the work being done by ITU-D study groups 1 and 2, the questions being studied during these study groups and the relationship between these study group questions and regional initiatives implementation.

The last presenter, Mr. Marcelino Tayob, ITU Senior Advisor in the Regional Office for Africa, presented the guidelines and frameworks on Regional Initiative Projects for the Working Groups highlighting the importance of linking the project proposals for each regional initiative to its respective expected results and KPIs. In recall, the regional initiatives for Africa are listed below:

- RI1: Building digital economies and fostering innovation in Africa
- RI2: Promotion of emerging broadband technologies
- RI3: Building trust and security in the use of telecommunications/information and communication technology
- RI4: Strengthening human and institutional capacity building
- RI5: Management and monitoring of the radio-frequency spectrum and transition to digital broadcasting

SESSION 4 – Regional Organizations perspective

Session 4 was moderated by Mr. Ali Drissa Badiel, ITU's Area Representative for West Africa and its speakers were Ms. Meriem Slimani (ATU), Mr. Abossé Akue-Kpakpo (WAEMU), and Mr. Mohamadou Arabani Saibou (ESMT). This session was devoted to coordination and cooperation with Regional entities. The moderator recalled the importance of cooperation with regional entities for ITU as stressed out in WTDC resolution 25.

ATU's presentation highlighted the benefits of broadband and their impact on welfare, jobs creation, consumers' comparative advantages noting that the contribution of traditional sectors to GDP declines

while that of the ICT sector increases. The presentation also elaborated among others on ATU's perspectives for digital economy, aiming at achieving the agenda 2063 as follows:

- stimulating the development of the broadband (infrastructure, regulation, frequencies allocation for 5G, bridging gap for rural areas, ...) and involving other private and public sectors (financial, energy, housing, ...);
- ensuring capacity building for human resources to meet the needs of technological evolution and adapt academic curricula to meet the needs of ICT labor market;
- -encouraging ICT innovation and the development of local contents and applications with the contribution of academia and the ICT industry;
- promoting a culture of cybersecurity and trust and upgrading data protection and privacy laws and legal frameworks;
- elaborating and supporting an African ICT standards framework to better meet the needs of the Region and adapt to environmental constraints (energy problems, climate change, etc.);
- engaging Africa has to play its role as a the main actor of its digital revolution.

WAEMU's presentation was not only on the efforts of RECs and their sub-entities in promoting regional frameworks on policies and strategies, but also on the need to develop reliable and sustainable infrastructure through redundancy and failover/substitute mechanisms. Funding mechanisms for initiatives and delivery of e-services to citizens and their sensitization in the appropriation use of ICT tools are a priority for WAEMU. The use of open source systems and applications is promoted to facilitate large scale use of ICT for populations and particularly for those in rural areas. New ICT regulatory frameworks are being elaborated with specific objectives of harmonization for countries in the WAEMU sub region.

ESMT's presentation was done from academia perspective, and aimed at setting up world class training institutions with centers of Excellence (CoE) labels. This can be achieved by building strong partnerships with the ICT industry actors, including manufacturers, and keeping abreast with changes and technology development in the ICT sector (e.g. blockchain, IoT, Big data), with a particular emphasis curricula adaptation to take into account innovation. ESMT delivers some high-level certifications on VSat, optical fiber, Cisco, some of its curricula are delivered through e-learning, and coaches some of its alumni through incubators to promote young entrepreneurship. Overall, ESMT's vision for digital economy is about digital inclusion for all, everywhere, and at any time to facilitate the achievement of the UN SDGs.

SESSIONS 5, 6, 7 – Breakout sessions

During this period the 5 established working groups met separately to discuss and propose ways of implementing the regional initiatives. The following delegates were nominated chairs, vice-chairs, and rapporteurs of the Working Groups respectively:

- Working Group 1 – Building digital economies and fostering innovation in Africa : Ms. Rachel Alwala, chair (Kenya), Mamadou Sarr, vice-chair (Senegal), Mr. Samuel Agyekun (Ghana) and Mr. Aziz Traoré (Cote d'Ivoire), rapporteurs;
- Working Group 2 - Promotion of emerging broadband technologies : Dr Marcel Kebré (Burkina Faso), Mr. Victor Teppeh (Ghana), vice-chair, Mr. Godfrey Muhatia (Kenya) and Mr. Hassan Daoussa Hassaballah (Chad), rapporteurs;

- Working Group 3 – Building trust and security in the use of telecommunications/information and communication technology: Mr. Kwame Baah-Achamfour, Chair (Ghana), Mr. Kennedy Djikolmbaibet, vice-chair (Chad), Ms. Jennifer Mensah (Ghana) and Mr. Pierre Ouega (Cameroon), rapporteurs;
- Working Group 4 – Strengthening human and institutional capacity building : Mr. Bafford Letshu, chair (DRC), Mr. Ikechukwu Adinde, vice-chair (Nigeria), -Paula Yebuah-(Ghana)
- Constance Amavi-(Ghana), rapporteurs Working Group 5 – Management and monitoring of the radio-frequency spectrum and transition to digital broadcasting: Mr. Leonel Inacio Augusto, chair (Angola), Mr. Inza Koné, vice-chair (Cote d’Ivoire), Mr. Raymond Ayene (Cameroon) and Mr. Isaac Koduah (Ghana), rapporteurs.

The outcomes of the breakout sessions are presented in the next paragraphs.

SESSION 8 – Reports from Breakout sessions

The purpose of session 8 was to present the outcome of breakout sessions, and particularly the projects proposed by the various groups. The projects proposed by the working groups under each regional initiative are listed below. The details on each specific project are attached as an annex to this report:

AFR-1: Building digital economies and fostering innovation in Africa

- AFR1.1: Strategy and policy planning for Digital Economy in Africa Region
- AFR1.2: Innovation ecosystems, capacity building and manufacturing ICT goods In Africa
- AFR1.3: Using digital health services to accelerate the attainment of health SDGs in the Africa region
- AFR1.4: Using digital services to accelerate the attainment of food security SDGs in the Africa region
- AFR1.5 : Addressing Interoperability challenges occasioned by disruption from digital innovations

AFR-2: Promotion of Emerging Broadband Technologies - Working Group Two

- AFR 2.1 Broadband Plan for Universal and Affordable Connectivity And Access Development and Implementation of Broadband Policies for cost effective connectivity and access.
- AFR 2.2 National and regional Internet exchange points to support high-speed, high-quality Broadband connectivity and access
- AFR 2.3 High-speed, high-quality and cost-effective broadband connectivity and access to land locked and land linked countries

AFR-3: Building Trust and Security in the use of Telecommunications/Information and Communication Technology

- AFR-3.1: Establishment of National, Sub-Regional and Regional CIRTs
- AFR-3.2: Revise ITU's Tool Kit on cyber security and facilitate its implementation by member states
- AFR-3.3: Develop guidelines for the protection of privacy and personal data
- AFR-3.4: Annual assessments of ITU Global Cybersecurity Index (GCI)

AFR-4: Strengthening Human and Institutional Capacity Building

- AFR-4.1: African girls can Code initiative (ongoing)
- AFR-4.2: Digital Skills development for Youth Employment (ongoing)
- AFR-4.3: Judiciary training in ICT sector laws interpretation, application and enforcement (ongoing)
- AFR-4.4: Online Connectivity and Peering of ICT Centres of Excellence
- AFR-4.5: Development/Adoption of Digital Labs and Workshops and training
- AFR-4.6: Development of ICT incubators for start-ups in Africa
- AFR-4.7: Digital Inclusion and ICT accessibility promotion in Africa

AFR-5: Management and Monitoring of the Radio-Frequency Spectrum and Transition To Digital Broadcasting.

- AFR5.1 : Regional High-level Workshop
- AFR5.2 : Equipment type approval Regional & National Labs
- AFR-5.3: Spectrum Planning and Refarming
- AFR5.4 : Develop business case for manufacturing or assembling of T.V premises (T.V, set-top boxes etc) in the Region
- AFR5.5 : Regional cross-border frequency coordination

SESSION 9 – Multi Stakeholder Round Table on Innovation and partnerships in delivering Regional Initiatives

The Multi stakeholder's session was moderated by Mr. Kwame Baah-Achamfour (Ghana), and the panelists were Ms. Ida Jallow (ITU), Mr. Shenghai Marufu (Zimbabwe), Mr. Abdoul-Aziz Traore (Cote d'Ivoire), Ms. Rachel Alwala (Kenya) and Mr. Desmond Boateng (Ghana).

The Chair introduced the topic on innovation and dialogue and called Ms. Ida Jallow to make a presentation on ITU Innovation Platform for Developing Vibrant Ecosystem. She started by thanking NCA for the hospitality granted to all participants since their arrival to Accra. During the presentation she highlighted the importance of having a clear vision of needs to be achieved. She stated that Africa should look at having world class exports, high skilled jobs, high industry growth which are the components of innovation driven economy. She shared a video on Digital Innovation Divide platform of the ITU that can be found via the link: "innovation.itu.int". She then went through the components of the innovation ecosystem, the maturity models of an innovation ecosystem, the atomic elements of

innovation, the architecture of the ITU Innovation platform, ITU Innovation Point of difference, the processes, among others.

Mr. Marufu introduced the innovation drive and objectives of it in Zimbabwe that was set up by the Ministry of ICT and Cybersecurity and administered by POTRAZ through the use of Universal Service Fund for which POTRAZ is the trusty. He informed participants that the focus of the innovation area included telecoms ICT Software Applications, hardware Postal and Couriers, job creation among others including the promotion of research and development. He also explained that the innovation drive is a revolving fund and have a grace period of 12 months.

Mr. Traoré explained that the focus of ICT innovation in Cote d'Ivoire was on poverty reduction and literacy eradication among the people of Cote d'Ivoire. He mentioned the online platform developed in the country called "MISSE" that was used for teaching and extensively used by the students as learning platforms. He proudly mentioned that Cote d'Ivoire was awarded "ISI Digital Innovation" this was applauded by participants in the room. He went on to mention the five (5) projects of impact among which was the project of assembling of laptops in the country.

Ms. Rachel Alwala presented the Kenya's experience: ICT Centric innovation Ecosystem. She mentioned that Kenya was known for innovation and gave an example of Kenya's innovation as the M-Pesa She indicated that despite what was achieved there was the need to strengthen ICT Innovation in the National Innovation Driven Economy. She explained that the Innovation Ecosystem was being driven under the blueprint called vision 2030 and now Big Four Agenda. She narrated Kenya's challenges as follows: limited availability of adequate frameworks, poor coordination among the "various digital cluster", and the concentration in urban areas with limited influence in the rural areas, digital skills gaps. She recognized that there were still Challenges in conducting research into ICT initiatives, including research funding and access to capital. The domestic market size could be seen also as limiting factor for the startups as well as the business culture. She has also noted that Kenya was using the ITU innovation tools.

Mr. Boateng from Ghana began his presentation by explaining that the availability of infrastructure in Ghana was the main enabler of ICT initiatives from extensive fiber optic infrastructure to mobile networks e.g. LTE. He informed participants that in rural communities in Ghana, ICT community centers had been established that allowed students and farmers in rural areas to have access to ICT based services. He revealed that Ghana was in the process of establishing ICT Parks and currently various e-initiatives were being implemented in the country such as e-Parliament, e- Procurement for Government, e-justice systems, e-cabinet. Also, Ghana had embarked on a National Identification System Initiative. He briefed participants about Ghana's Smart Communities project that would allow un-served and underserved areas to have access to internet and be connected to the rest of the world to help bridge the digital gap and ensure digital inclusion.

The questions and answer and debate centered on the participation of the private sector in the innovation and the use of Universal Service Fund Access has been used to foster innovation ecosystems and how to address the challenges of harmonizing initiatives within the country and bringing the various stakeholders across various sector together. Also the need to support the startups to scale up was observed.

SESSION 10 –Private sector perspective

The Deputy-Minister of Communication, Hon. Vincent Odotei Sowah, moderated the session 10. The two first speakers to join the podium were Dr. Isa Boateng and Dr. Nii Quaynor. Dr. Boateng delivered a presentation on Big Data and addressed the theme in details from different perspectives: consumers, transactional, purchase, social, connected data. He presented the effervescence of new media that are native to computers. Meta metrics are used to manage and measure information, but performance metrics are also needed to optimize customers experience and satisfaction to meet their expectations. He informed participants that it is also important to modernize operations and to accelerate innovation, particularly focusing on business needs and demand satisfaction. He elaborated on the concept of value creation through interaction and advocacy. He concluded by showing some ways where the use of big data could create value: transparency and high availability, High performance and Accuracy, Customer Intimacy.

Dr. Quaynor's presentation was on Blockchain. He presented where blockchain is being implemented in Africa, and explained BitCoin transactions where that technology is intensively used. Blockchain lessons can be summarized in 3 categories: identity, secure transaction, and data-storage (permanent records). Blockchain is therefore beneficial because of its confidence assurance in an open environment. The list of Blockchain technology use is not exhaustive; for property security, for instance, certification and traceability, integrity is essential and Blockchain technology can help guarantee them. He concluded by showing how Blockchain technology is a great chance for Africa to take advantage of its development. He concluded that Blockchain impact is huge and opportunity great and encouraged to take advantage of the opportunities to overcome the risk of Africa being sidelined. Innovators who have begun to run should continue.

Ghana Chamber of Telecoms took the floor to act as an advocacy entity for ICT sector in Ghana. Their common platform has improved the nature and the ranking of the ICT Industry index in Africa. Then Ericsson presented their activities in Africa and in Ghana and the trends of 5G market for the 5 upcoming years. A big increase of traffic is expected in 5G networks for the upcoming years; and an analysis of consumers' habits trends and expectations was presented and supported by a short video. Some applications on mining facilities, automotive and IoT were demonstrated. The speaker concluded his presentation by linkage between Technology and SDGs.

Vokacom chair presented the activities of his company, mainly on facial recognition technologies at an affordable cost. Trotro Tractor services presented a solution for farmers to rent on demand tractors and other mechanized farming products. Csquared was created in Ghana as an open FTTx access provider, it serves as ISP and MNO only. The network delivers services across multiple dimensions: costs reduction, adapted payment, and enabled fast expansion. The same entity is managing metro fiber backbone in Uganda, Ghana and partnering in Liberia. Microsoft shared some perspectives in innovation in Africa. Increased access to ICT networks will impact the use of submarine cables.

Session 10 was wrapped up by presentations from five (5) young innovators from the ICT incubator center of Ghana. They presented an overview of their software products and services (design, trade, medical, mathematics, languages translation, etc.). An ITU video projection on Artificial Intelligence concluded that session.

SESSION 11 – Report on RDF Conclusions and Recommendations

In the closing session, the draft report of RDF-2018 was presented by Mr. Ali Drissa Badiel, ITU's Area Representative for West Africa on behalf of the drafting team composed of Ms. Ida Jallow (ITU), Ms. Jennifer Mensah (Ghana) and Mr. Isaac Koduah (Ghana). The outcomes of all sessions were summarized for the audience, before the final report was posted to ITU's website to be consulted by the participants. A vote of thanks was delivered by Ms. Emily Heather Kamula (Malawi-MACRA) on behalf of all participants of RDF-2018. She thanked the organizers for their warm welcome and commended the huge efforts made by Ghana in developing its ICT sector.

Mr. Andrew Rugege, ITU's Regional Director for Africa, delivered his concluding remarks on behalf of ITU. He commended the work done by the Chairman, Mr. Joe Anokye, the Minister of Communication and the two Deputy-Ministers, the host country and the organizers, including his own ITU colleagues, that made RDF-2018 a successful event.

The Deputy-Minister, Mr. George Andah, addressed the audience for his closing remarks that marked the end of RDF-2018. Among others, he congratulated the organizers for the successful organization of the event, magnified the good relationship between ITU and Ghana that has led to some good achievements, thanked the delegates for their participation and wished all foreign attendees a safe trip back home.

The main recommendation and take-away from RDF-2018 is the mobilization of efforts and resources for the successful implementation of ITU's Regional Initiatives for Africa in general, and through the implementation of the projects identified by the breakout sessions working groups, summarized in session 8 of this report, and presented in details in annex of the report.

ANNEXES – Reports from Working Groups

Proposals from AFR1: Building digital economies and fostering innovation in Africa

The situation today

Over the past decade countries in Africa have made tremendous progress in rolling out the broadband infrastructure that has significantly improved access to ICT services. Broadband penetration in Africa has reached significant levels, with mobile broadband playing a significant role. However, to reach out to the still unconnected, make better use of the infrastructure and enhance the impact of ICTs on the socio- economic development of African nations, the countries in the region are embarking on the transformation to digital economies in order to reap the full benefits of ICTs and ICT-based innovation.

Objective of AFR1

To build digital economies and foster innovation in Africa. Countries in the Africa region are in need of interventions that would help them transform into digital economies. It is necessary that ITU assist Member States in the Africa region to reap the full benefits of the digital economy by addressing the emerging policy and regulatory challenges. In line with growing digital economies, information and communication technology (ICT)-based innovations, which have demonstrated their potential to contribute to the socio-economic development of countries, are also growing. ITU is called upon to support Member States in the Africa region to build more effective ICT-based innovation ecosystems.

Expected results

1. Assistance in the development of national digital economy strategies focusing on enabling policies and regulations that can enhance the use of digital technologies.
2. Assistance in the development of digital inclusion strategies, policies, regulatory frameworks and guidelines specifically targeted at achieving social and financial inclusion through improving digital literacy and access.
3. Assistance in developing action plans with digital key performance indicators (KPIs) encompassing the adoption of e-applications geared to sustainable development in various aspects of African economies.
4. Assistance in the adoption and implementation of relevant standards that are targeted at addressing challenges of interoperability stemming from the disruptive and transformative spread of digital innovation.
5. Support for improving Member States' capability to create effective innovation policy interventions in all stages of innovation.
6. Help in designing models for financing the ICT ecosystem in Africa, and identification of partnership opportunities to establish sustainable innovation frameworks.

7. Support for capacity building, especially in the area of intellectual property protection as a fundamental pillar for innovation.
8. Assistance in the development and operationalization of frameworks for manufacturing of ICT goods in Africa resulting from innovative work.

PROJECT PROPOSALS:

Project 1.1. Strategy and policy planning for Digital Economy in Africa Region (ER 1,2,3)

Objective: Assist countries in the Africa region in developing their digital economy strategies, enabling policies and regulations to facilitate ICT-based innovation and foster their socio-economic development and social inclusion.

Activities in 2019

1. Assess the current situation in the region to identify gaps, undertake a readiness assessment, review best practices, identify stakeholders, and conduct comparative studies.
2. Develop a model for the region
3. Organize at least three regional capacity-building and validation workshops.

Activities in 2020 and 2021

1. Establish guidelines to assist the membership in developing national economy strategies and policies based on validated models. Establish guidelines for adoption. Continue with the gap analysis to identify challenges and strategies for addressing them.
2. Continuing to assist countries in need.
3. Monitoring and evaluation of the project.

Outputs

1. Draft Models for digital economy policies and strategies
2. Draft Guidelines

Estimated budget

USD 180 400 (Year 1 USD 80 400 – Years 2 and 3 USD 100 000)

To be adjusted by ITU based on actual metrics

Potential partners

- Beneficiary countries
- Donors to be identified
- ITU

AFR1

Project 1.2. Innovation ecosystems, capacity building and manufacturing ICT goods In Africa (ER 3,5,6,7,8)

Objective: To support Member States' capability to create effective innovation policy interventions at all stages of innovation, design models for financing the ICT ecosystem in Africa, develop and operationalize frameworks for manufacturing ICT goods in Africa, and identify partnership opportunities to establish sustainable innovation frameworks.

Activities in 2019

1. Conduct study on ongoing initiatives in the region on the various innovation ecosystems that exist in Africa region and develop models that will enhance the innovation ecosystem
2. Promote training and capacity development on ITU innovation toolkit
3. Identifying potential financial partners to work with at various stages of the project, organize meetings and conferences to mobilize partnerships.
4. Facilitate capacity-building workshop on innovation policy and frameworks, Intellectual Property Rights, research and development.
5. Enhance partnership with potential funding for innovation initiatives

Activities in 2020 and 2021

1. Development of guidelines, model policies and other relevant documents that will help countries with customization and transposition into national documents. ITU assistance in capacity building, research and development and global patent protection, among other areas.
2. Assist countries requiring assistance to customize and transpose the model documents into their national documents.
3. Continuing to assist countries in need.
4. Project monitoring and evaluation

Outputs

1. Reports of Study
2. Reports of Capacity building workshops
3. Potential partners identified
4. Guidelines and policies

Estimated budget

USD 80 400 (Year 1 USD 20 400 – Years 2 and 3 USD 60 000).

Potential partners

Beneficiary countries.

Donors to be identified.

AFR1

Project 1.3. Using digital health services to accelerate the attainment of health SDGs in the Africa region

(ER 3)

Objectives:

1. Support the implementation and upscaling of digital health solutions at national level, with an emphasis on country-prioritized solutions that contribute to universal health coverage (UHC) and Sustainable Development Goals (SDGs), ensuring that countries have appropriate frameworks in place including e-health strategies and/or e-health policies.
2. Build capacities of a new generation of African digital health leaders who will lead the process of change and transformation of public health using ICT technology in their countries.
3. Create country-level digital health common platforms as a technology infrastructure in order to support health care delivery in a consistent and efficient manner.
4. Strengthen the capacity of local stakeholders to achieve optimal and efficient use of available resources for e-health, including the development of public-private partnerships (PPPs) with telecommunication providers and non-governmental organizations (NGOs).
5. Large-scale deployment of appropriate, low-cost and high-impact evidence-based and potential game-changing innovations that address health needs.

Activities in 2018

1. Conduct two regional digital health capacity-development workshops to train future country and WHO/ITU digital health leaders in the skill sets required to help with the deployment of large-scale digital health systems. Training will cover:
 - systems and landscape analysis;
 - digital health leadership and management skills;
 - digital health skills: solutions, interoperability, enterprise architecture, telecommunications, etc;
 - policy and regulatory expertise;
 - business and sustainability models.

Activities in 2019 and 2020

1. Conduct four or five country-specific digital health studies to ascertain functional and technical requirements and establish the necessary national digital health architecture and information infrastructure.

Country studies will design an overall National Digital Health (DH) Architecture and Information Infrastructure for the health sector based on a national (digital) health strategy or roadmap and on a “National Digital Health Interoperability Framework”.

Outputs

1. Workshop reports
2. Country-specific DHS
3. Country Digital Health Architecture and Information Infrastructure

Estimated budget

USD 150 000 (Year 1 USD 50 000; Years 2 and 3 USD 100 000).

Potential partners

WHO African Regional Office.

Beneficiary countries

Senegal, Nigeria, Gabon, Cabo Verde, Mozambique, Lesotho.

Potential donors

USAID, Digital Square, SPIDER, World Bank, AFD.

AFR1

Project 1.4. Using digital services to accelerate the attainment of food security SDGs in the Africa region

(ER 3)

Objectives:

1. Support the implementation and upscaling of digital solutions and innovations for agriculture at national level, with an emphasis on country-prioritized solutions that contribute to achieving food security, improved nutrition and the promotion of sustainable agriculture.
2. Ensuring that countries have in place appropriate planning frameworks, such as e-agriculture strategies and/or policies.
3. Build capacities of a new generation of African digital leaders who will lead the process of change and transformation of the agriculture sector using ICT technology.
4. Create country-level digital agriculture common platforms as a technology infrastructure in order to support the delivery of agriculture services in a consistent and efficient manner.
5. Strengthen the capacity of local stakeholders to move towards optimal and efficient use of available resources, including the development of public-private partnerships (PPPs) with telecommunication providers and non-governmental organizations (NGOs).
6. Promote the creation of an enabling environment with innovative sustainable models designed for limited-resource contexts.

Activities in 2018

1. Conduct one regional e-agriculture strategy development workshop.

The objectives of the workshop are to:

- bring together e-agriculture policy-makers, for example . from agriculture and/or ICT ministries;
- raise awareness of the e-agriculture guide, and discuss and validate it with stakeholders in hands-on training on the use of the toolkit;
- bring together proven e-agriculture solutions that will benefit various stakeholders;
- collect and share knowledge, synergies and experiences of e-agriculture models, and cases of success or failure in the region;
- discuss the role of existing national and regional communities of practice (knowledge networks) among e-agriculture solution providers in the e-agriculture sector.

Activities in 2019 and 2020

2. Conduct one or two regional e-agriculture strategy-development workshops.
3. Assist three or four countries in developing and implementing national e-agriculture strategies; assistance to be provided to countries to develop a “National e-Agriculture Strategy”. The Strategy will be followed by the design of the overall national Digital

Architecture and Information Infrastructure for Agriculture based on the national (digital) strategy or roadmap and on a “National Digital Agriculture Interoperability Framework”.

Outputs

1. Workshop reports
2. Number of countries assisted in implementing e-agriculture strategies

Estimated budget

USD 150 000 (Year 1 USD 50 000, Years 2 and 3 USD 100 000).

Potential partners

FAO African Regional Office.

Beneficiary countries

To be determined.

Potential donors

Canadian CIDA.

AFR1

Project 1.5. Addressing Interoperability challenges occasioned by disruption from digital innovations

(ER 4)

Activities 2018 - 2020

1. Establish guidelines for active participation in the C&I Africa Group and for follow-up on the implementation of Pillar 3 (Capacity Building) and Pillar 4 (Assistance to Developing Countries) of the ITU C&I Programme, and promote the establishment of harmonized conformity and interoperability programmes, ICT standards and regional testing activities, as well as measures to combat counterfeit and substandard devices.
2. Facilitating Inter-regional framework on mobile money interoperability (MMI)
3. Promoting a general framework for interoperability of ICT services

Outputs

1. Established guidelines
2. Inter-regional framework for MM interoperability
3. Framework for interoperability of ICT services

Estimated budget

To be determined by ITU

Potential partners

Member countries

ITU

Others TBA

Projects proposals for AFR2: Promotion of emerging broadband technologies

1-Project 2.1 –Broadband Plan for Universal and Affordable Connectivity And Access

Development and Implementation of Broadband Policies for cost effective connectivity and access.

2- Statement of the problem/Project justification/Situation today

Over the past decade some countries in Africa have made few progress in rolling out the broadband infrastructure that has significantly improved access to ICT services. Broadband penetration in these African countries have reached significant levels, with mobile broadband playing a significant role.

However, most citizens in many African countries remain unconnected and the range of technologies for connectivity remains limited.

Most existing infrastructure deployment is private sector led and the rate of deployment has slowed down. Lack of national policies for broadband and implementation plan have been identified as some of the factors. Lack of broadband polices have led to the persistent access gap.

There is call from both private and public sectors for the development and implementation of policies and plan that will stimulate growth and enable us to close the access gap.

3- Objective of the Project

To stimulate growth in broadband connectivity and achieve universal access by the year 2021

4- Expected results (Which RI Expected results it addresses)

- a. Assistance in the development of national and regional strategic plans, focusing on enabling policies and regulations addressing high-speed, high-quality broadband networks in the region.*
- b. Providing support that will enable the sharing of best practices on financing models as well as the identification of partnership opportunities to enhance high-speed, high-quality broadband.*
- c. Assistance in promoting the harmonization of subregional broadband plans so as to ensure equitable access to high-speed, high-quality broadband for all.*

- d. *Assistance with human capacity development resources, through training programmes, workshops and such like, to exchange expertise and to provide persons with disabilities with the platform to participate in and benefit from the emergence of new broadband technologies.*
- e. *Assistance in extending the regional and continental backbone initiative to ensure the resilience of submarine cables.*

5- Activities during the cycle (2019 -2021)

Activities in 2019

- 1. *Assess the current situation in the region, review best practices, conduct comparative studies,.*
- 2. *Develop broadband guidelines for the region*
- 3. *Organize at least three regional capacity-building and validation workshops.*
- 4. *Develop/update guidelines on implementation plans to be shared during the validation workshops.*

Activities in 2020 and 2021

- 1. *Establish guidelines to assist the membership in developing national economy strategies and policies based on validated models.*
- 2. *Establish guidelines for adoption. Continue with the gap analysis to identify challenges and strategies for addressing them.*
- 3. *Continuing to assist countries in need.*
- 4. *Monitoring and evaluation of the project.*

OUTPUTS/DELIVERABLES/KPI

1-Assessment report with the situation in region and identification of areas requiring intervention/ with gap analysis

2- Capacity building report

3- Guidelines published

5 – Report on Countries Assisted

6 – Cost estimates/Budget

USD 180 400 (Year 1 USD 80 400 – Years 2 and 3 USD 100 000).

7- Source of funds/Potential partners

- *Countries without national broadband policy and implementation plan. One to be selected from each sub-region*

Donors to be identified.

- *World bank*
- *US Aid*
- *Africa Development Bank*
- *Universal Access Funds*
- *Beneficiary government*

AFR2

1 Project 2.2: National and regional Internet exchange points to support high-speed, high-quality broadband connectivity and access

2- Statement of the problem/Project justification/Situation today

Whereas more countries are deploying national exchange points and few regional exchange points are being developed, there is a need for those countries that have not yet developed exchange points to commence developing so that available broadband connectivity can be utilized, keeping national traffic national and regional traffic within the region, thereby reducing cost on bandwidth.

3- Objective of the Project

To promote implementation of national and regional Internet exchange points to support high-speed, high-quality and cost effective broadband connectivity and access for new emerging technologies to keep intratraffic within a country and within the region.

4- Expected results (Which RI Expected results it addresses)

5. Support for improving Member States' capability to create effective innovation policy interventions in all stages of innovation.

6. Help in designing models for financing the ICT ecosystem in Africa, and identification of partnership opportunities to establish sustainable innovation frameworks.

5- Activities during the cycle (2018 -2021)

Activities in 2018

1. Assess the situation in Africa in co working with African Union Commission through PIDA/AXIS and other related projects for a synergy of action

2. Completion of an IPv6 testbed in Zimbabwe to be used as a sub-regional testbed for IPv4 to IPv6 migration in Southern Africa.

Activities 2019-2021

1. Assess available national and regional Internet exchange points, analyse existing gaps and, if necessary, adopt measures to close them.

2. Assess IPv4-IPv6 migration, review the gap if any and propose recommendations to close it. Promote awareness of IPv6 testbeds and IPv6 adoption guidelines and of the importance of exchange points, through workshops.

4. *Linking and peering sub-regional and regional internet exchange points.*

5. *Capacity building for member states with newly established and existing testbeds on the migration from IPv4 to IPv6*

6- OUTPUTS/DELIVERABLES/KPI

1-*Assessment report on available national and regional exchange points including IPv6 testbeds.*

2. *Availability of functional national and regional IXPs*

3. *IPv4- IPv6 migration report*

4. *Workshop result based reports (Trainer of Trainers - XX people from yy countries trained)*

5- *Guidelines published*

6. *Number of Countries Assisted*

6 – Cost estimates/Budget

USD 200,000.

7- Source of funds/Potential partners

African Union Commission,

World Bank

EU Commission

African Development Bank,

Member States (USF),

Donors to be identified, to include foundations with an interest in child development, as today's children are tomorrow's adults and should be ready for the next industrial revolution.

AFR2

1-Project 2.3: High-speed, high-quality and cost-effective broadband connectivity and access to landlocked and land linked countries

2- Statement of the problem/Project justification/Situation today

Many initiatives are underway in Africa in the way to promote high-speed, high-quality and cost-effective broadband connectivity and access:

- *the PIDA Priority Action Plan (PIDA PAP) through terrestrial connectivity and cross-border links;*
- *ICT projects funded by AfDB programs: Trans Sahara Optical Fiber Backbone, Central Africa Backbone;*
- *Projects financed by the World Bank (WARCIP, RCIP, etc.) for landing points for coastal countries and virtual landing points for landlocked countries (Burkina Faso, Rwanda, Malawi, etc.)*

However, the gaps remain huge in terms of broadband penetration within a country and across countries in the sub-region. Thus, efforts must be supported to develop.

3- Objective of the Project

Assist countries in the Africa region in developing and promote high-speed, high-quality and cost-effective broadband connectivity and access to new emerging technologies for service delivery including universal access and service.

4- Expected results (Which RI Expected results it addresses)

Assistance in extending the regional and continental backbone initiative to ensure the resilience of submarine cables.

5- Activities during the cycle (2019 -2021)

Activities in 2019

1. *Assess the current situation in the region on continental backbone initiatives as well as gap analysis for high-speed, high-quality broadband networks, review best practices, conduct comparative studies, and develop a model for the region in view to ensure cost-effective access to new emerging broadband technologies. Analyse gaps that need to be addressed.*
2. *Organize at least three regional capacity-building and validation workshops on high-speed, high-quality broadband networks.*

Activities in 2020 and 2021

1. *Assist the states of the region to develop a broadband network for public services;*

2. *Assist coastal countries to have at least two submarine cable landing points to improve resilience for access to international capacity;*
3. *Assist landlocked countries to create virtual landing points for access to international connectivity of submarine cables;*
4. *Promote the use of alternative infrastructures (fiber deployed along power lines, for example) for the resilience of submarine cables;*
5. *Develop/update subregional broadband policies to ensure competitive pricing and equitable access to high-speed, high-quality broadband for all;*
6. *Support the implementation of cross-border interconnection policies in Africa, especially in data capacity transport charging.*
7. *Monitoring and evaluation of the project*

? - OUTPUTS/DELIVERABLES/KPI

1. *Assessment report with the situation in region and identification of areas requiring intervention/ with gap analysis*
2. *Number of Countries Assisted for public broadband networks;*
3. *Number of Countries Assisted for submarines cables landing;*
4. *Number of Countries Assisted for virtual landing points;*
5. *Evaluation report on implementation of cross-border interconnection policies*

6 – Cost estimates/Budget

USD 180 400 (Year 1 USD 80 400 – Years 2 and 3 USD 100 000).

7- Source of funds/Potential partners

Beneficiary countries.

World Bank, AfDB through IPPF, EU, AFD

Donors to be identified.

Projects proposals for AFR3: Building trust and security in the use of Telecommunications/Information and Communication Technology

1- PROJECT 3.1- ESTABLISHMENT OF NATIONAL, SUB-REGIONAL AND REGIONAL CIRTs

2- Statement of the problem/Project justification/Situation today:

CIRTs are critical in addressing cyber security incidences efficiently and effectively. Not more than fifteen (15) out of the forty-four (44) sub Saharan African countries do not have CIRTs and so there is the need to establish national CIRTs to handle computer incidents at the national level. There are currently no regional and sub-regional CIRTs for the existing national CIRTs to interconnect to.

3- Objective of the Project

- a. Identify and provide technical assistance to member countries who do not have CIRTs to implement CIRTs with funding from their national sources such as universal service funds and from other funding partners through bilateral and multilateral donors.
- b. Establish democratic criteria for selecting Sub-Regional CIRTs involving Regional Economic Communities. There can be more than one country selected for hosting sub-regional CIRTs to address language issues.
- c. Establish democratic criteria for selecting Regional CIRTs. There can be more than one country assigned for hosting a Regional CIRT to address language issues.
- d. To establish interconnection among all sub-regional and regional CIRTs.
- e. All Internet Exchange Points (IXPs) should connect to the national CIRTs.

4- Expected results (Which RI Expected results it addresses)

R3 – 1, R3-9

5- Activities during the cycle (2019 -2021)

Activities in 2019

1. Fifteen (15) member states are given technical assistance and mentorship to establish national CIRTs.
2. Consultation with regional economic communities to select at least one (1) sub-regional CIRT.
3. Provide technical assistance for selected sub-regional CIRTs to interconnect.

Activities in 2020 and 2021

1. Fifteen (15) member states are given technical assistance and mentorship to establish national CIRTs.
2. Consult economic communities and the AU to select at least one (1) regional CIRT.
3. Provide technical assistance for selected sub-regional CIRT and regional CIRTs to interconnect.

? - OUTPUTS/DELIVERABLES/KPI

- 1- *Thirty (30) National CIRTs established.*
- 2- *Connect 2020 Agenda to raise cyber security readiness by 100 percent achieved by 2020*
- 3- *At least four (4) sub-regional CIRTs and a regional CIRT established.*

6 – Cost estimates/Budget

1. Facilitation fee for establishing national CIRTs (this does not involve CIRT implementation cost): *USD10,000 – USD15,000 per country.*
2. Facilitation fee for selecting a sub-regional CIRT: (all regional communities should be invited to one venue): USD 20,000
Total: USD470,000

7- Source of funds/Potential partners

- a. *Universal Service Funds*
- b. *Bilateral and Multilateral donors*

AFR3

1-PROJECT 3.2 - Revise ITU's Tool Kit on cyber security and facilitate its implementation by Member States.

2- Statement of the problem/Project justification/Situation today:

There is an existing ITU Tool Kit on cybersecurity which requires to be updated to satisfy other expected results as agreed at WTDC-17 relating to policies, strategies, legislation and regulatory frameworks.

1- Objective of the Project

A. To have the ITU toolkit to be relevant in addressing the following:

- I. Capture a framework for developing a national cybersecurity policy and strategy;
- II. Guidelines for developing cyber-legislation and regulations;
- III. Framework for combating spam and cyberthreats;
- IV. Guidelines for implementing CIRTs in accordance with Global Cybersecurity Agenda (GCA);
- V. Framework for implementing cybersecurity awareness programmes to help Organizations and consumers of member states understand and protect themselves against cyberthreats/risks.

B. To Provide technical assistance to member states to adopt and implement Malabo convention and Budapest Convention.

4- Expected results (Which RI Expected results it addresses)

R3- 3, R3-4, R3-6, R3-7, R3-9 R3-10

5- Activities during the cycle (2019 -2021)

Activities in 2019

1. To revise ITU Tool Kit on cybersecurity for immediate implementation by July 2019.
2. Provide technical assistance to existing fourteen (14) countries with CIRTs, as well as, the new fifteen (15) countries to adopt and implement Malabo and Budapest Conventions.

Activities in 2020 and 2021

1. Provide technical assistance to the other fifteen (15) countries to adopt and implement Malabo and Budapest Conventions.
2. Monitoring and evaluation of implemented projects in 2021.

? - OUTPUTS/DELIVERABLES/KPI

- 2- ITU Toolkit Revised.
- 3- Technical assistance for the adoption of Malabo and Budapest Conventions for all African Countries.

6 – Cost estimates/Budget

1. Revision of the tool kit: USD 30,000
2. Technical assistance for adopting Budapest and Malabo Conventions: USD 50,000

Total: USD 80,000

7- Source of funds/Potential partners

1. *ITU seed fund.*
2. *Donors and sponsors.*

AFR3

1- PROJECT 3.3 - Develop guidelines for the protection of privacy and personal data.

2- Statement of the problem/Project justification/Situation today:

Some countries do not have data protection policies and regulations. Also countries require collaboration on protection of privacy and personal data as there is no existing framework.

3- Objective of the Project

To develop guidelines which addresses policies, strategies, collaboration, legislation and regulatory frameworks for protecting privacy and personal data.

4- Expected results (Which RI Expected results it addresses)

R3-8

5- Activities during the cycle (2019 -2021)

Activities in 2019

- 1. Consultancy to develop the guidelines*
- 2. Capacity building workshop to disseminate the guidelines*

Activities in 2020 and 2021

- 1. Validation workshop on the guidelines*

? - OUTPUTS/DELIVERABLES/KPI

Guidelines on data protection and privacy developed.

6 – Cost estimates/Budget

- 1. Consultancy Fee: USD 30,000*
- 2. Workshops: USD 100,000*

Total Cost: USD 130,000

7- Source of funds/Potential partners

- 1. ITU seed fund.*
- 2. Sponsors, donors and beneficiary countries.*

AFR3

1- PROJECT 3.4 - Annual assessments of ITU Global Cybersecurity Index (GCI).

2- Statement of the problem/Project justification/Situation today:

Not more than 14 member states currently have CIRTs and therefore some African Countries have not fully implemented cybersecurity strategies and policies. with the technical assistance to be provided for the adoption of cybersecurity strategies there is the need for annual assessments of member states to be better placed in the report on the ITU global cybersecurity index.

3- Objective of the Project

Assess member countries in the adoption and implementation of cybersecurity policies and strategies.

4- Expected results (Which RI Expected results it addresses)

R3-2

5- Activities during the cycle (2019 -2021)

Activities in 2019

1. Awaiting implementation of other related projects.

Activities in 2020 and 2021

1. Annual assessment in accordance with Global Cybersecurity Agenda (GCA) for Global Cybersecurity Index (GCI) improvement.
2. Annual workshops to discuss assessment reports.

? - OUTPUTS/DELIVERABLES/KPI

1. Annual assessment report.
2. Annual awareness of performance.

6 – Cost estimates/Budget

1. Consultation fee: USD 30,000
2. Workshops: USD 100,000

Total Cost: USD 130,000

7- Source of funds/Potential partners

1. *ITU seed fund.*
2. *Sponsors, donors and beneficiary countries.*

Projects proposals for AFR4: Strengthening human and institutional capacity building

Ongoing AFR4 projects for which no further details are required:

Project 4.1 - African girls can Code initiative

Project 4.2 - Digital Skills development for Youth Employment

Project 4.3 - Judiciary training in ICT sector laws interpretation, application and enforcement.

New AFR4 projects proposals:

1- Project 4.4 - Online connectivity and peering of Centre of Excellence in Africa

2- Statement of the problem/Project justification/Situation today

Since the creation of the centers of excellence the ITU have made effort to support the development of the centers through different kind of initiative including support with Faculty and curriculum development. However this effort have not gone too par in facilitating the sustainability of the centers of excellence. One of the major factors militating against the success of the centers of excellence is the inability to share resources leveraging existing technology platforms. The lack of connectivity among the centers has resulted in a situation where the centers are unable to share experience as true network of centers of excellence. A connected center of excellence will create a more robust and integrated community of learners within the centers of excellence network

3- Objective of the Project

The objective of the project is to promote increase collaboration among the Centre of excellence there by enhancing the sharing and exchanges of resources (Faculty, Labs, training contents, etc.).

4- Expected results (Which RI Expected results it addresses)

AFR R4 3a

AFR R4 4

5- Activities during the cycle (2019 -2022)

Activities in 2019

1. Stakeholders' engagement to secure project buying/acceptance.
2. Assess the current situation of the centre of excellence (COE) in the region and identify gaps in the existing relationship among the centre.
3. Determine global best practices for peering and online collaboration.
4. Develop a regional architecture for online collaboration among the COE
5. Design policy framework for implementation

Activities in 2020 and 2022

1. Organize meetings for the COE to discuss the project and assign responsibilities
2. Establish guidelines for global best practices for peering and online collaboration
3. Establish guidelines online collaboration
4. Submit a report on the developed online collaboration and peering architecture
5. Implementation of a regional architecture for online collaboration among the COE
6. Monitoring and evaluation of the project.

6 - OUTPUTS/DELIVERABLES/KPI

1. Reports of the stakeholder meetings
2. Guidelines for the global best practices for peering and online collaboration
3. Guideline for online collaboration
4. Report of the developed online collaboration and peering architecture
5. Report of the Implemented regional architecture for online collaboration
6. Monitoring and evaluation guidelines.

6 – Cost estimates/Budget

USD 300,000:00 (Year 1 USD 100,000:00 – Years 2 , 3 and 4 USD 200,000:00).

7- Source of funds/Potential partners

Beneficiary countries

African region

Donors to be identified

1. *West and Central African Research Network (WACREN)*
2. *Ubutntu Alliances*
3. *GEANT*
4. *Arab State Network (ASREN)*
5. *African Development Bank*
6. *GSMA*

7. *NEPAD*
8. *Vendors*
9. *Billgate foundation*
10. *Dangote Foundation*
11. *Tony Elumelu Foundation*

AFR4

1- Project 4.5 - Development/adoption of ICT Labs for workshops and training

2- Statement of the problem/Project justification/Situation today

The activities of ITU-D and ITU-T on Conformance testing of ICT Devices have generated growing interest in Africa countries and members are interested in building their capacities through workshops and hands on training. However, there are little or no testing facilities in the region for these hands on training. This has led to the lack of understanding and interpretation of test results, thus unscrupulous manufacturers and importers taking advantage of the situation and distribute counterfeit and sub-standard ICT equipment. Consequently this has resulted in environmental, health and safety issues, negative impact on network quality of service delivery as well as fraud in digital transaction services.

3- Objective of the Project

- To ensure safety of the use of ICT devices in the market
- To aid in the reduction of counterfeit and sub-standard ICT devices in the region
- To provide affordable testing services for manufacturers in the region resulting into lower prices of devices
- to have testing facilities in the regions to test ICT devices for conformance.
- To provide training and capacity building in setting up and running of digital labs
- To develop Harmonized ICT standards and Mutual Recognition Agreements (MRAs) in the region
- to fulfill the objectives of Resolutions 47, 76, Pillars 1,3 and 4 of the ITU C&I programme

4- Expected results (Which RI Expected results it addresses)

- Training facilities for capacity building on ICT testing for the African Group (RI4) (RI3) (RI1)
- Accredited testing facilities in the Regions (RI4)
- Established local manufacturing plants (RI3)(RI4)
- Knowledgeable ICT professionals (RI4)

5- Activities during the cycle (2019 -2021)

Activities in 2019

- ITU to assess the laboratories in the regions
- ITU to adopt established labs in the regions as centres for training and capacity building
- ITU to support labs for Accreditation
- ITU to support member states to develop regulations on C&I

- Establish guidelines for active participation in the C&I Africa Group and for follow-up on the implementation of Pillar 3 (Capacity Building) and Pillar 4 (Assistance to Developing Countries) of the ITU C&I Programme.
- Signing of cooperation agreements between labs and member states.
- Organise capacity building, training and workshops at the conformance labs for the regions.

Activities in 2020 and 2021

- Organise forums to harmonize standards for the regions.
- Develop MRAs for member states in the regions.
- Monitoring and evaluation of the projects.
- Provide technical assistance to member states in their plans to establish lab
- Liaise with governments for commitment to provide funding where necessary to set up labs

OUTPUTS/DELIVERABLES/KPI

- *Conformance labs in Ghana adopted as training center for the regions by 2019*
- *60 people from ITU member states to be trained by the end of 2019*
- *Workshops on C&I organized within the regions by 2019*
- *Harmonised Standards and MRA available by 2021*
- *At least one member state assisted per sub-region to set up a lab by 2021*

6 – Cost estimates/Budget

USD 500,000 per year.

7- Source of funds/Potential partners

Bill and Melinda Gates Foundations

Governments

European Commission

Other Donor Agencies

AFR4

1- Project 4.6 - Development of ICT incubators for start-up in Africa

2- Statement of the problem/Project justification/Situation today

- ❖ Environnement non propice (manque d'accompagnement) pour l'entrepreneuriat des jeunes ;
- ❖ Capacité d'intégration limitée dans les entreprises de TIC existantes ;
- ❖ Adaptation des services de TIC au contexte local ;
- ❖ Délocalisation de certaines prestations, innovations ou services qu'on aurait pu confier aux jeunes pour booster l'économie ;
- ❖ Chomage des jeunes ;

3- Objective of the Project

- ❖ Créer des emplois pour les jeunes;
- ❖ Promouvoir l'innovation des jeunes ;
- ❖ Promouvoir l'utilisation des produits et services de TIC adaptés au contexte local ;

4- Expected results (Which RI Expected results it addresses)

- ❖ Présence d'au moins 1 incubateur standard UIT dans chaque pays.

5- Activities during the cycle (2019 -2021)

Activities in 2019

1. Etude du marché local ;
2. identification de meilleures pratiques ;
3. élaboration des lignes directrices ;
4. études pour le design et la localisation des incubateurs dans les différents pays.

Activities in 2020 and 2021

1. mise en place des incubateurs avec l'assistance de l'UIT ;
2. suivi et évaluation du projet ;

? - OUTPUTS/DELIVERABLES/KPI

- 1- Lignes directrices sur la mise en place des incubateurs ;
- 2- Incubateurs ;
- 3- Nombre d'entreprises de jeunes créés dans le domaine des TIC ;
- 4- Nombre d'emplois créés ;
- 5- Rapport de suivi et évaluation du projet ;

6 – Cost estimates/Budget

USD 180 400 (Year 1 USD 80 400 – Years 2 and 3 USD 100 000).

7- Source of funds/Potential partners

Bénéficiaires : Tous les pays.

Partenaires : industries, chambres de commerce, BIT, ONG, gouvernements, universités.

AFR4

1- Project 4.7 - Digital Inclusion and ICT accessibility promotion in Africa

2- Statement of the problem/Project justification/Situation today

African countries all over the continent, have made frantic efforts in ensuring that their citizenry are included in digital ICT revolution.

In reality, these efforts have not yielded any result. The problem of none or little awareness of digital/ICT, limited ICT/digital infrastructure, limited/ICT training institution, especially for persons with disability; lack of adequate funding among others have all culminated into poor ICT/digital accessibility.

At this stage of progress of the digital economy and environment, all people and consumers should be included for a better life.

3- Objective of the Project

- *Mettre en place des centres nationaux et un centre regional dédiés au Développement des outils de formation TIC en faveur des personnes ayant des besoins spécifiques :*
 - *L'accessibilité des sites internet*
 - *L'accès à la documentation électronique*
 - *L'accessibilité des applications*
 - *L'accessibilité des téléphones mobiles*
- *Favoriser la connaissance et une plus large autonomisation des ayant des besoins spécifiques en Afrique*
 - *Accès aux métiers du numérique*

4- Expected results (Which RI Expected results it addresses)

- *Obtenir une meilleure inclusion des ayant des besoins spécifiques à l'écosystème du numérique*
- *Des centres nationaux sont créés*

5- Activities during the cycle (2019 -2021)

Activities in 2019

1. *Assess the current situation in the region, review best practices, conduct comparative studies, and develop a model for the region. Analyse gaps that need to be addressed.*

2. *Organize at least three regional capacity-building and validation workshops. Develop/update guidelines on implementation plans to be shared during the validation workshops.*

Activities in 2020 and 2021

1. *Establish guidelines to assist the membership in developing national training centers for ICT accessibility*
2. *Establish guidelines for active participation in the centers*
3. *Continuing to assist countries in need.*
4. *Monitoring and evaluation of the project.*

OUTPUTS/DELIVERABLES/KPI

1-Adoption of policy

2- centers established

3- people from countries trained

4- Guidelines published

5-Countries Assisted

6 – Cost estimates/Budget

USD 1 million

7- Source of funds/Potential partners

Beneficiary countries in Africa region.

Donors to be identified/UNDP/WHO

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

1-Project AFR5.1- High-level Regional Workshop

2- Statement of the problem/Project justification/Situation today

The deadline for the Migration from Analog Television Broadcasting to digital terrestrial television (DTT) was on 17th June 2015. Most Africa countries are yet to either commence the process or are in the various phases of implementation, due to financial, political and leadership constraints.

3- Objective of the Project

This project is aimed at achieving the following objectives:

- To create the needed awareness amongst African countries to migrate from Analog TV broadcasting on to Digital Terrestrial Television broadcasting.
- To engage Africa leadership into committing financial and human resources into the digital migration process.

4- Expected results (Which RI Expected results it addresses)

Develop a framework that highlights the socioeconomic benefits of digital migration.

Create awareness that commits decision makers to adopt clear strategies leading to the implementation of the DTT project in the entire region.

5- Activities during the cycle (2019 -2021)

Activities in 2019

1. *Assess the current situation in the region, review best practices, conduct comparative studies, develop a model for the region and analyse gaps that need to be addressed.*
2. *Organize at least three(3) regional capacity-building and validation workshops. During this workshop, guidelines on implementation plans will be developed and shared.*

Activities in 2020 and 2021

1. *Establish guidelines to assist the membership in developing national economic strategies and policies based on validated models. Establish guidelines for adoption. Continue with the gap analysis to identify challenges and strategies for addressing them.*

2. *Establish guidelines for active participation in the C&I Africa Group and for follow-up on the implementation of Pillar 3 (Capacity Building) and Pillar 4 (Assistance to Developing Countries) of the ITU C&I Programme, and promote the establishment of harmonized conformity and interoperability programmes, ICT standards and regional testing activities, as well as measures to combat counterfeit and substandard devices.*

3. *Continuing to assist countries that require support.*

4. *Monitoring and evaluation of the project.*

? - OUTPUTS/DELIVERABLES/KPI

1-Assessment report with the situation in region and identification of areas requiring intervention/ with gap analysis

2- XX people from yy countries trained

3- Guidelines published

5 – XX Countries Assisted

6 – Cost estimates/Budget

USD 180 400 (Year 1 USD 80 400 – Years 2 and 3 USD 100 000).

7- Source of funds/Potential partners

Beneficiary countries.

Donors to be identified.

AFR5

1. Project AFR5.2- Equipment type approval Regional & National Labs

2- Statement of the problem/Project justification/Situation today

The transition from analogue analogue to digital broadcasting requires the adoption of new DTT receivers (set top boxes and integrated digital TV sets). There is no global standard for digital TV receivers raising the need for conformance requirements in the Africa region. East Africa (EACO) has adopted standards for DTT receivers just as Southern Africa (SADC) and West Africa (ECOWAS). To ensure that receivers that come into the African , markets conform to the sub-regional standards there is the need to develop the capacity to test sample devices to prevent the sale of substandard devices.

3- Objective of the Project

Assist sub-regional bodies to establish DTT receiver conformance testing laboratories in at least one country within each of the four sub-regions.

4- Expected results (Which RI Expected results it addresses)

Support for the development of spectrum management plans at national, regional, and global levels including for the transition to digital broadcasting.

5- Activities during the cycle (2019 -2021)

Activities in 2019

- 1. Identify a country in each region most suitable for the citing of a DTT conformance laboratory.*
- 2. Organize four regional capacity building workshops on DTT receiver conformance testing and related type approval issues*
- 3: Develop technical specifications for the regional conformance test labs*
- 4 Develop sustainable economic model for the regional labs*

Activities in 2020 and 2021

- 1. Establish 4 regional labs*

? - OUTPUTS/DELIVERABLES/KPI

- 1-Report on selection of countries for citing of labs*

2- Capacity building workshops

3 Published technical specifications for labs

4- Approved economic models for labs

5 Commissioning of 4 regional labs

6 – Cost estimates/Budget

USD 2 100 000 (Year 1 USD 100000 – Years 2 and 3 USD 2m).

7- Source of funds/Potential partners

Beneficiary countries.

Donors to be identified

AFR5

1- Project AFR5.3- Spectrum Planning and Refarming

2- Statement of the problem/Project justification/Situation today

In most regions of Africa, there have been problems with efficient spectrum planning and refarming, thus making spectrum management difficult to monitor. In the wake of providing the needed quantity of spectrum for deployment for specific networks, operators/service providers often use more than what is appropriated to them simply because of the lack of managements tools and other resources that have subjected regulators to making assumptions. This brings about challenges of combating warehousing, fraud and interferences, especially around border areas. Moreover, the need of increased use of spectrum with the emergence of new digital technologies like broadband, AI, AoT, ITS, etc, there is a serious need for replaning and refarming of our spectrum, which happens to be a scarce resource.

3- Objective of the Project

Assist countries falling in such category in the Africa region to protect existing services by strategizing, planning and researching on studies for efficient use of the spectrum.

4- Expected results

This addresses the six (6) RI expected results of the ITU

5- Activities during the cycle (2019 -2021)

Activities in 2019

- 1. Assess the current situation in the region, review best practices, conduct comparative studies, and develop a model for the region. Analyse gaps that need to be addressed.*
- 2. Organize at least three regional capacity-building and validation workshops. Develop/update guidelines on implementation plans to be shared during the validation workshops.*

Activities in 2020 and 2021

- 1. Establish guidelines to assist the membership in developing national allocation frequency table and policies based on validated models. Establish guidelines for adoption. Continue with the gap analysis to identify challenges and strategies for addressing them.*
- 2. Establish guidelines for active participation in the study groups in ITU-R and Pillar 4 (Assistance to Developing Countries) of the ITU C&I Programme, and promote the establishment*

of harmonized planning and re-farming, spectrum monitoring systems both at the regional and national levels.

3. *Continuing to assist countries in need.*
4. *Monitoring and evaluation of the project.*

? - OUTPUTS/DELIVERABLES/KPI

1-Assessment report with the situation in region and identification of areas requiring intervention/ with gap analysis

2- Personnel of spectrum departments of countries be trained

3- Guidelines published

5 – As many countries to be assisted

6 – Cost estimates/Budget

USD 120,000 (Year 1 USD 60,000 and Years 2 USD 60,000).

7- Source of funds/Potential partners

Beneficiary countries.

Donors to be identified, including ITU

AFR5

1-Project AFR5.4 - Develop business case for manufacturing or assembling of T.V premises (T.V, set-top boxes etc.) in the Region

2- Statement of the problem/Project justification/Situation today

Sub-Saharan African countries with a population about 1billion import most of its digital T.V premises (T.V, set-top boxes etc) from mostly China, this is associated with a number of challenges which includes low standard equipment, stress on local currencies and high cost of equipment.

With digital migration being a must and not a choice, all African countries at a point in time would have to finally migrate in order to make use of the digital dividend in improving broadband by deploying IMT.

There is therefore the need for affordable, home-grown solutions to meet Africa's challenges.

3- Objective of the Project

- *Assist countries in the Africa region in developing African solutions in the area of DTT equipment manufacturing and assembling.*
- *Adopting common technical standards for the African region.*

4- Expected results (Which RI Expected results it addresses)

AFR RI 1, AFR RI 2, AFR RI 3

5- Activities during the cycle (2019 -2021)

Activities in 2019

1. *Assess the current situation in the region, review best practices, conduct comparative studies, and develop a model for the region. Analyse gaps that need to be addressed.*
2. *organize regional forum for exchange of country experience, engage entrepreneurs and other stakeholders.*
3. *drafting of technical, business and feasibility plan on DTT equipment manufacturing or assembling in the region.*
4. *Each countries evaluation of the proposed technical, business and feasibility plan on DTT equipment manufacturing or assembling in the region.*

Activities in 2020 and 2021

1. *Regional forum to approve draft proposal of technical, business and feasibility plan on DTT equipment manufacturing or assembling in the region.*
2. *funding for DTT equipment manufacturing or assembling in the region*

? - OUTPUTS/DELIVERABLES/KPI

- Developed technical, business and feasibility plan on DTT equipment manufacturing or assembling in the region.
- Proposal of funding the project
- Encourage African entrepreneurs to invest in the DTT equipment manufacturing or assembling project
- Job creation and capacity building

6 – Cost estimates/Budget

USD 180 400 (Year 1 USD 80 400 – Years 2 and 3 USD 100 000).

7- Source of funds/Potential partners

Beneficiary countries.

Donors to be identified.

AFR5

1- Project AFR5.5 - Regional cross-border frequency Coordination Meeting

2- Statement of the problem/Project justification/Situation today

Example: Over the past decade countries in Africa have made tremendous progress in rolling out the broadband infrastructure that has significantly improved access to ICT services. Broadband penetration in Africa has reached significant levels, with mobile broadband playing a significant role. However, to reach out to the still unconnected, make better use of the infrastructure and enhance the impact of ICTs on the socio- economic development of African nations, the countries in the region are embarking on the transformation to digital economies in order to reap the full benefits of ICTs and ICT-based innovation.

3- Objective of the Project

Assist countries in the Africa region in developing their digital economy strategies, enabling policies and regulations to facilitate ICT-based innovation and foster their socio-economic development and social inclusion.

4- Expected results (Which RI Expected results it addresses)

AFR RI 1, AFR RI 2, AFR RI 3

5- Activities during the cycle (2019 -2021)

Activities in 2019

- 1. Assess the current situation in the region, review best practices, conduct comparative studies, and develop a model for the region. Analyse gaps that need to be addressed.*
- 2. Organize at least three regional capacity-building and validation workshops. Develop/update guidelines on implementation plans to be shared during the validation workshops.*

Activities in 2020 and 2021

- 1. Establish guidelines to assist the membership in developing national economy strategies and policies based on validated models. Establish guidelines for adoption. Continue with the gap analysis to identify challenges and strategies for addressing them.*
- 2. Establish guidelines for active participation in the C&I Africa Group and for follow-up on the implementation of Pillar 3 (Capacity Building) and Pillar 4 (Assistance to Developing*

Countries) of the ITU C&I Programme, and promote the establishment of harmonized conformity and interoperability programmes, ICT standards and regional testing activities, as well as measures to combat counterfeit and substandard devices.

3. *Continuing to assist countries in need.*
4. *Monitoring and evaluation of the project.*

? - OUTPUTS/DELIVERABLES/KPI

1-Assessment report with the situation in region and identification of areas requiring intervention/ with gap analysis

2- XX people from yy countries trained

3- Guidelines published

5 – XX Countries Assisted

6 – Cost estimates/Budget

USD 180 400 (Year 1 USD 80 400 – Years 2 and 3 USD 100 000).

7- Source of funds/Potential partners

Beneficiary countries.

Donors to be identified.