



## ITU REGIONAL DEVELOPMENT FORUM FOR AFRICA

### Roadmap (draft 1.0)

by ITU Regional Office for Africa

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#### OVERVIEW

The COVID-19 pandemic has significantly impacted on the world in 2020; this can be felt in all sectors of activity and is supported by studies in all regions of the world. Indeed, the June 2020 Global Economic Prospects describes both the immediate and near-term outlook for the impact of the pandemic and the long-term damage it has had on the prospects for growth. The baseline forecast envisioned a 5.2 percent contraction in global GDP in 2020, using market exchange rate weights—the deepest global recession in decades, despite the extraordinary efforts of governments to counter the downturn with fiscal and monetary policy support. Over the longer horizon, the deep recessions triggered by the pandemic are expected to leave lasting scars through lower investment, an erosion of human capital through lost work and schooling, and fragmentation of global trade and supply linkages (World Bank, 2020).

It is to this backdrop that the 2020 Regional Development Forum for Africa (RDF-AFR), initially planned to take place in Lusaka, Zambia, was held from 6 to 7 October 2020 virtually with the theme “**Digital transformation to achieve the Sustainable Development Goals (SDGs) – Digital development, partnerships and funding**”. One day prior to RDF-AFR, i.e. on 5 October 2020, breakout sessions were held on the implementation of Regional Initiatives by countries and their contributions to RDF-AFR. RDF aims at sharing and discussing achievements, experiences, work programs and partnerships amongst ITU Members and interested partners for effective implementation of the outcomes as agreed by the World Telecommunication Development Conference (WTDC).

RDF-AFR 2020 received 32 contributions and witnessed the attendance of 270 participants online, among which were 25 ITU Staff, delegates from 35 countries, 25 participating organizations, 193 sector members represented, 7 from academia, 5 from Scientific or Industrial Organizations, 7 from Recognized Operating Agencies, and 15 from Non Members. This document proposes a roadmap for digital economy development in Africa, as the major outcome of RDF-20.

#### WHAT IS THE DESIRED STATE?

RDF-AFR 2020 displayed the digital development efforts in Africa and defined the next steps for implementing activities, projects and the regional initiatives, with digital development, partnerships and funding in mind. Indeed, it is a truism that the ICT world is a fast-changing one and all stakeholders have to adapt to that reality; in this regard, the ITU Regional Office for Africa has been working on its theory of change (ToC), supported by the BDT 10 thematic priorities (Networks & digital infrastructure;

Digital policy & regulation; Digital services & applications; Cybersecurity; Digital innovation ecosystems; Digital inclusion; Capacity development; Emergency telecommunications; Statistics; Environment). Overall, that ToC aims at facilitating digital transformation for all stakeholders in Africa and would among others be relying on capacity development, policy and strategies as its foundation layers, while leveraging on sustainability, safety and security, affordability and inclusiveness as its pillars to efficiently achieve its goals.

In line with the aforementioned vision, all stakeholders in the digital ecosystem were invited to submit written contributions on their projects and ideas for the future; 32 written inputs and proposals in the form of contributions were received and made available on the event website. A co-creation approach was adopted during the preparatory session with an analysis of the current state, projection of desired state and an analysis of gaps that need to be addressed towards digital transformation for Africa. This was followed by four high-level round tables (6-7 October) which provided further input to the desirable future to build back better with digital technologies where all stakeholders have a role to play.

Overall, RDF-AFR 2020 aimed to create a paradigm shift in ITU's vision for ICT development for real digital economic uptake. ITU strongly believes that this could be achieved not only by co-creating ICT development solutions with the Member States, but also by helping the Member States keep abreast of technology development to leverage the potential of ICT to change their populations' lives while significantly contributing to an increase in national GDP. A good mean to accelerate the implementation of that vision includes adoption of emerging technologies. Emerging technologies, in a nutshell, can be seen as the advent of new disruptive technologies, but can also be seen as the continuous development or improvement of existing technologies for more value-added, more efficiency and more impact on ICT deployment to effectively address end-users needs. They can encompass innovative technologies, but not limited to Artificial Intelligence (AI), Internet of Things (IoT), 5G, Serverless Computing/Cloud computing, Biometrics, Augmented Reality/Virtual Reality, Blockchain, Robotics, Drones, Cybersecurity, Natural Language Processing, and Quantum Computing. The potential of these technologies for the achievement of the UN Sustainable Development Goals, and therefore on people's lives, is well established. They would considerably help African countries accelerate their digital economy development.

#### **WHAT IS THE CURRENT SITUATION?**

In order to achieve the aforementioned vision, a good approach would be to go from where Member States currently stand, identify existing gaps and analyse them to come up with innovative solutions to overcome the challenge. With this in mind, ITU's Regional initiatives (RIs) for Africa Region (AFR) for the current cycle (2018 – 2021) are the followings:

- AFR RI 1 - Building digital economies and fostering innovation in Africa;
- AFR RI 2 - Promotion of emerging broadband technologies;
- AFR RI 3 - Building trust and security in the use of telecommunications/information and communication technology;
- AFR RI 4 - Strengthening human and institutional capacity building;
- AFR RI 5 - Management and monitoring of the radio-frequency spectrum and transition to digital broadcasting.

On one hand, in order to successfully implement these RIs, the Africa Region has regularly conceived a yearly rolling operational plan (OP) comprising among others activities, as well as seed funds for projects aimed at assisting countries in achieving the RI goals. The overall objective is to conceive

activities and projects that do not only comply with Result Based Management (RBM) principles, but also have a national, sub-regional or regional impact.

On the other hand, while operational plan activities are conducted in the framework of the 10 ITU identified thematic priorities and mostly conducted on a yearly basis, projects implementation can exceed more than one year and may require additional resources mobilization to concretize. The mobilization of resources remains the major challenge for projects implementation in the Africa Region and thus a partnership-based approach is required. Below is a list of new projects that the Africa Region has been developing with partners over the past year:

- Enabling digital financial services to accelerate digital financial inclusion in Ethiopia
- Advancing digital and data technologies and empowering youth with digital skills for enhanced food security for Africa
- Enabling accessibility and usability of e-commerce to strengthen cross border digital trade within the framework of the African Continental Free Trade Area (AfCFTA)
- Scaling up Smart Villages – Niger
- Digital Farming – Grow Smart
- Ensuring continuity of learning for the most vulnerable children and youth in Senegal using a UN COVID-19 Multi-Partner Trust Fund
- ICT Benchmarking in Central Africa

The list of these projects is not exhaustive and at different stages of developed. Their successful implementation requires brainstorming on ways and means of mobilizing adequate resources for that purpose. More details are provided on these projects in **Annex 2**.

A SWOT analysis of the continent's current situation with regard to ICT development could be summarized as follows:

- Regarding its **strengths**, Africa continent has a population of about 1.3 billion inhabitants, from which the majority is young. With a population representing 16.72% of the total world population, Africa ranks number 2 among regions of the world; 43.8 % of its population is urban and the median age in Africa is 19.7 years (Worldometers.info, 2021). All African countries are striving to develop their digital economy and a political ambition in this respect can be noted at the national (countries), sub-regional (RECs) and regional (continental organizations) levels.
- However, Africa continent presents some **weaknesses** regarding ICT development in general. Indeed, ITU's ICT Development Index (IDI) has often shown Africa's indicators ranking below other continents' ones; which calls upon major efforts for African countries to catch up with ICT development. Other weakness that worth being mentioned is the lack of financial resources and adequate technical expertise at national level to address ICT development challenges for countries.
- By chance, Africa has some advantages compared to other regions of the world, among which some major **opportunities** that encompass among others its young population (cf. median age of 19.7 years, Worldometers.info, 2021) that makes it a good demographic dividend the continent can leverage on to develop its ICT sector. This would require some major investments in education and capacity building to acquire the necessary skills to that end. Additionally, the advent of African Continental Free Trade Area (AfCFTA) by Africa Union makes it a great opportunity for African countries to envisage to operate in a single digital unified space throughout the continent; this is a great chance African countries can seize to develop their ICT business among others at

continental level. Initiatives like the One Network Area Roaming (ONAR) contribute to the achievement of that goal.

- Lastly, some **threats** can arise if certain parameters are not properly mastered by African countries. The first one being the aforementioned demographic dividend which, if not properly managed through education, capacity building, digital skills development and ICT opportunities promotion, can end up becoming a huge burden for African countries. Also, if African countries do not create the appropriate opportunities and incentives for their ICT experts to seize on the continent, the majority of their best talents may end up migrating to serve other regions of the world where such opportunities exist: in that case, the continent might end up serving as a huge market for foreign firms without any intrinsic significant contribution to ICT development.

## **HOW TO BRIDGE THE GAPS?**

A good approach to address ICT development challenges in Africa would be for countries to gather and discuss to agree on concrete actions and projects for building back better with digital in Africa. That process is fully co-created by Member States themselves. The details of such an approach would entail focusing on the implementation of existing projects, identification and crafting of new relevant project proposals, partners and resources mobilization for these projects implementation, and a clear timeframe and roles distribution for the identified projects and actions implementation. Typically, the timeframe for the implementation of these major actions could be an ITU four-year cycle; i.e. from WTDC-21 to WTDC-25 for instance. The timeframe for projects implementation would be the duration defined in the concerned project concept notes or project documents; the same would apply to the roles distribution as stated in the concept notes or project documents.

### **1. Brainstorming on ways and means of bringing about a digital Africa**

#### **1.1. Identified challenges along with proposed solutions**

Proposed contributions by the Member States, followed by the co-creation process held during the high-level round tables led to the identification of challenges faced by digital economy uptake in Africa and proposed solutions along with them. These challenges are of several orders, among which one can quote the followings:

##### **a. Stakeholder engagement and partnerships**

A key success factor for digital economy would be stakeholders' engagement and partnership development. Indeed, stakeholders' global industry involvement in policy, regulatory and harmonization process is key to digital economy uptake in Africa; it is important to explore ways and means of strengthening them in an increasing global environment/market.

Additionally, strengthening cooperation and interconnection between operators remains a challenge; a possibility of addressing this could be to develop national IXPs and interconnecting them into a proper Regional IXP to ease traffic exchange among operators and ISPs. An advocacy and outreach policy would have to be crafted to attract more regional players for connectivity and peering at the IXP.

Some additional issues such as the lack of coordination with key development partners, especially for road accessibility and power grids, to develop ICT infrastructure, the need to exploit synergies with key government ministries to achieve universal access obligations, the lack of sustainability of projects, the lack of private sector participation would need to be paid serious attention on the

continent. Building more partnerships at national level with universities would also be an asset and worth being considered in national capacity development strategies. Overall, an emphasis needs to be put on the industry involvement in ITU's work across its defined Thematic Priorities to assist its Member States speed up their digital economy development.

#### **b. Skills and capabilities**

Developing skills and capabilities is a must for countries to create a critical mass of actors able to handle digital economy needs. To that end, countries would need to develop their technical capacities to leverage on the full potential of digital for their socio-economic development, but also by strengthening capacities, institutions, and regulations.

It is also recognized that Africa Region is in a dear need for capacity building in the realm of ICT. Indeed, without proper capacity building, African populations are disadvantaged and unable to fully partake in the evolving digital economy for their continent socio-economic development. A good start to address that challenge would be to address skills gaps among professionals and actors from the sector at all levels, ranging from the professionals to decision makers and entrepreneurs in the ICT sector. Capacity building is for instance needed for entrepreneurs to empower them to leverage on ICTs such as social media in their businesses promotion and reach out to partners.

Digital exclusion is a real obstacle to social and economic development, affecting over 40% of the global population as pointed out during the meeting. Therefore, efforts need to be deployed to bridge the existing digital skills gaps, train and equip the population with the requisite digital skills to partake in the digital economy; while funding issues need to be streamlined in all required strategies, roles and approaches to be successful on that aspect.

#### **c. Resilience of networks, cybersecurity and interconnection**

Cybersecurity has become a cornerstone in today's world to guarantee confidence, safety and security in the cyberspace for a viable digital economy. However, it is also recognized that the developing world is often lacking resources to put in place the necessary structures to strengthen the resilience of networks and IT assets in general.

Additional deficiencies such as the lack of resources to continue building capacity for all stakeholders of the ICT sector, failure to adopt appropriate policies and strategies at national, added to the lack of networks interconnection to IXP at national and sub-regional levels constitute another concern that needs to be thoroughly addressed. Indeed, the lack of IXP forces operators and IXP to route domestic traffic externally; which has the drawback of creating more delay in applications' response time, consuming more bandwidth while losing control over the traffic as opposed to if it were to be routed locally.

In the same wave, Child Online Protection (COP) needs to be paid specific attention by countries. This could for instance encompass creating synergies of actions among actors for COP, while putting an emphasis on a regional approach and coordination, and partnerships at technical and financial levels to not only acquire the required expertise and to mobilize funding for its related strategies implementation.

#### **d. Standards, policy and regulation**

On one hand, standards are very decisive for quality networks and services for a harmonious digital ecosystem in Africa. To that end, a minimum harmonized normative framework is needed for African countries to ensure safety and protection of their essential services and critical infrastructure.

On the other hand, policy and regulation are also of utmost importance to ensure safer and equitable competition in the ICT sector, and to allow its growth. It is recognized that technology development has often overtaken the law on the ground; which makes it a must for policy and regulation to be constantly keeping abreast. Additionally, adequate regulatory and institutional frameworks are proven to be essential in driving digital ecosystem growth and their effect builds up over time. Indeed, digital services development at national level is significantly correlated with the level of advancement of ICT policies and regulations, and the competition and market power regulatory set-up in the concerned country. Regarding investment in the digital ecosystem, it is proven to be directly and positively influenced by the maturity of ICT regulatory frameworks and by ICT competition frameworks in particular. ICT regulatory frameworks are quite important for the development of infrastructure and digital services; which justifies the support needed by African countries in facilitating community networks development to address connectivity divide and gaps.

Policy and regulation also need to tackle other important issues such as data protection, privacy, and electronic transactions so that all aspects of the digital legal space have clear guidelines. Gathering more data and knowledge on community network models can be essential to inform policy and regulation at national level.

**e. Accelerate universal access to affordable and meaningful broadband connectivity and access**

There is evidence to suggest that affordability or the ability of individuals or households to pay for ICT services relative to their disposable income is one of the main barriers that affect consumer consumption of these ICT services. Affordability depends not only on both price and income, but also on other competing spending choices such as food, shelter, and clothing among others. In many African countries, mobile-data baskets for instance are still out of reach for a large part of the population, costing more than 10 per cent of GNI p.c., in situations where incomes are already constrained.

Monitoring of ICT prices depends on several criteria, such as the type of service (fixed vs. mobile), bundling of different services, different operators (within the same market), data, voice and text allowances, and whether national or international comparisons are made.

In addition, ICT coverage gaps still exist in Africa more so in remote areas as they are often perceived to be not commercially viable for the private sector/ industry. Therefore, focus is needed to identify and adopt sustainable affordable broadband solutions for concurrently the remote and underserved communities and on interventions for last mile connectivity to be deployed today and now. A good mean to tackle that issue could be to leverage on Universal Service Funds (USF), usually collected by Regulatory Authorities or dedicated entities in African countries. The purpose of USF is mostly to focus on provision of access and services where they are lacking the most. USF will also need to tackle skills issues, since access and services cannot be completed or profitable without the required skills.

**f. Innovation and digital labs**

Innovation is quite important in the ICT ecosystem characterized by a fast-changing environment. Therefore, innovation and digital labs need to be tailored to mainstream scientific research results in the ICT ecosystem development. Innovation and digital labs can serve as a platform for cooperation and experience exchange on ICT development for African countries.

Innovation and digital labs also need to incorporate incubators for young entrepreneurs in the ICT sector. The labs scope would need to encompass support to micro, small and medium enterprises to

promote their growth and profitability. Encouraging international collaboration in the region and informing a national strategy for innovation and entrepreneurship in ICTs would be an asset. Putting the emphasis on digital migration in countries, and setting up of DTT labs in each sub-region would also be useful; the same applies to strengthening monitoring and evaluation systems and providing foundational evidence to improve youth-friendly health services could be considered in the perspectives.

Last but not least, since access to energy is an issue for most countries, innovation and digital labs would also deal with sustainable energy supplies as the energy supply by traditional electricity networks is not available everywhere in Africa. All these perspectives would not be implemented if sustainable funding resources and business models are not put in place prior to them.

#### **g. Leveraging on data technologies including big data**

The emergence of big data has led to an ever-increasing amount of new data sources and opened up new opportunities for measurement, access and dissemination. For instance, the COVID-19 pandemic starkly and powerfully illustrates how critical data is used to protect lives & livelihoods. Although the ICT sector is the biggest source of big data and driver of data technologies, the region is yet to fully unlock data and its analytics potential. Making better use of data and setting strategic foundations (data infrastructure and data policies related to access privacy, security & protection) for data driven digital transformation is integral for Africa.

#### **1.2. Additional perspectives**

In addition to integrating and mastering the findings from the previous chapter (i.e. Identified challenges along with proposed solutions), the following items are interesting development paths to explore to bring about real digital transformation in Africa.

#### **a. Partnerships and key players involvement**

Partnerships, both technical and financial, are unmissable to succeed in digital transformation; but before reaching out to potential partners, one needs to be thorough in projects preparation to make sure projects proposals are comprehensive and bankable. Resource mobilization is essential to fund key projects implementation. An emphasis could be put on public private partnership (PPP) and bringing big players, such as Google, Amazon, Facebook, Apple, Microsoft (the GAFAM) in the loop could be helpful.

Strengthening cooperation and partnerships with ITU on flagship projects such as Giga and PRIDA, with other sister UN Agencies, Regional Economic Communities (RECs) and with local stakeholders. Overall, it is fundamental to create good synergy of action among actors and therefore avoid efforts duplication on the ground to bring about a harmonious ICT ecosystem development in African countries.

#### **b. Fostering digitalization**

ICT-based services consumption by end-users, companies and governmental entities is the core driver for digitalization in a concerned country. To that end, developing broadband networks and innovative services to lead the demand, added to online services delivery by public and private sectors would put the concerned country on the good track for digitalization.

In order to be able to achieve that, countries would have to put an emphasis on sustainable broadband connectivity that has become the new norm for digital society and commit for digital transformation.

The development of digital economy blueprints, with an emphasis on broadband, innovative services, policy, regulation, and cybersecurity, with the support of ITU, the development of community centers for underserved populations, the creation of innovation bridges, and conception of digital flagship projects would be among others a milestone towards the achievement of digitalization for African countries.

## 2. Identification of key actions and projects for building back better with digital in Africa

The seventeen United Nations Sustainable Development Goals (SDGs) is a universal agenda and a call to action for low, middle and high-income countries alike. It lays out a set of comprehensive goals that focus on people, planet, prosperity, peace and partnership by 2030. To be able to achieve them, it is fundamental for countries, RECs and all interested stakeholders like ITU to come up with comprehensive project proposals embracing all these aspects of the SDGs.

On ITU's side, a lot of initiatives have been underway to address development issues, among which one can quote the Youth Strategy, aligned with the United Nations Youth Strategy (Youth 2030). The strategy targets the achievement of a world where every young person is connected, benefits from the digital economy and digital transformation, and is fully empowered through access to and use of ICTs. The youth strategy is fully aligned with the shared global vision reaffirmed in Resolution 200 (Rev. Dubai 2018) of the Plenipotentiary Conference under the Connect 2030 Agenda, envisaging an information society, empowered by the interconnected world, where telecommunications/ICTs enable and accelerate social, economic and environmentally sustainable growth and development for everyone.

Another key agenda of ITU is to mainstream gender and promote gender equality and empower women through ICTs. Indeed, ITU's vision is to become a model organization for gender equality and to leverage the power of ICTs to empower both women and men. ITU Resolution 70 (Rev. Dubai, 2018) highlights the role of ICTs to advance gender equality and women's empowerment in many ways, notably by encouraging young women and girls to pursue studies and careers in science, technology, engineering and mathematics (STEM) for their social and economic empowerment, and by highlighting the value that women bring to the tech sector. It encourages Member States and Sector Members to review their policies related to the information society to ensure the inclusion of a gender perspective in all activities.

Conception of ICT-centric development actions and projects would need to mainstream at least these concepts. Some projects one can quote here are Giga and PRIDA. Giga is a joint ITU-UNICEF project aiming to connecting all schools to the Internet to enable all young people to have access to information, to benefit from the possibilities offered by the Internet and to have freedom of choice. The Giga initiative is in line with conclusions 1A and 1B of the UN Secretary-General's High Level Group on Digital Cooperation in which the latter indicates, on the one hand, that "**by 2030, all adults should have affordable access to digital networks**" and advocates, on the other hand, the establishment of a global multi-stakeholder alliance mobilizing the United Nations to create a platform for 'exchange of digital public goods'. The Policy and Regulation Initiative for Digital Africa (PRIDA) is a joint initiative of the African Union (AU), the European Union (EU) and the International Telecommunication Union (ITU), that enables the African continent to reap the benefits of digitalization by addressing various dimensions of broadband demand and supply in Africa and building the capacities of AU Member States in the Internet Governance space. It is supported by the EU-funded Pan African Programme. PRIDA's target population are all over 1.200 million African citizens. PRIDA's overall objective is to foster universally accessible and affordable broadband across the continent to unlock future benefits of internet-based services. Detailed information on these two initiatives are presented in **Annex 3**.



Overall, the way forward to build back better with digital in Africa would rely on crafting comprehensive projects and initiatives addressing the maximum of SDGs achievement, building strong collaboration and partnerships, and mobilizing adequate resources for their implementation.

## **WHAT ARE THE ENVISAGED NEXT STEPS?**

### **1. Features of the roadmap**

First, this roadmap is meant to be a living document; which means that after every new RDF, RPM or WTDC, the roadmap key elements could be readjusted to take into account any major change or development. Secondly, the roadmap would be serving ITU to guide the memberships (Member States, sector members and other stakeholders) towards a fully digitalized society implementation. Among the partners, one would count public and private sectors, funding partners, NGOs, other sister UN agencies, etc. The main goal of this roadmap is achieve an impact through the facilitation of digital transformation for all stakeholders in Africa. In recall, that transformation process would among others be relying on capacity development, policy and strategies as its foundation layers, while leveraging on sustainability, safety and security, emerging technologies, affordability and inclusiveness as its pillars to efficiently achieve its goals according to the ongoing ToC of ITU Africa Region. Each action or project in this regard would be crafted along with its timeline and its roles distribution among stakeholders.

### **2. Member States engagement**

In recall, this roadmap was co-created by ITU with the Member States for the Member States to assist them in their digital transformation process. In order to fast-track the Africa's digital transformation agenda achievement, the RDF-AFR 2020 presented a set of recommendations aiming to facilitate its implementation. The list of recommendations (R) shared below is not exhaustive and can therefore be revamped as deemed appropriate, according to new development in the future:

- R1: Build strategic partnerships with major players of the ICT ecosystem for digital economy;
- R2: Craft attractive new projects aiming at addressing the identified gaps, while redesigning ongoing projects for more results and impact;
- R3: Mobilize resources through funding partners and untapped sources to build digital economy;
- R4: Accelerate universal access to affordable broadband as the foundation of digital economy;
- R5: Mainstream cybersecurity as a key component for safety and confidence in the cyberspace;
- R6: Promote emerging technologies as a mean to speed up digital economy development;
- R7: Promote digital services development, such as Smart Villages, e-Health/m-Health, e-Education, to speed up achievement of UN SDGs by 2030;
- R8: Enhance human and institutional capacity building, with an emphasis on Decent Jobs and Digital Skills, to create a critical mass of actors to run digital economy;
- R9: Promote Digital inclusion and Digital Financial Inclusion;
- R10: Foster Digital Innovation and Ecosystem Building to mainstream cutting-edge technologies (e.g. AI, block chain, big data, IoT) in the fast-changing digital ecosystem;
- R11: Put in place adequate data driven policy and regulatory frameworks to create an enabling environment for digital economy uptake.
- R12: Facilitate the development and harmonisation of data policies and frameworks including but not limited data protection, privacy, access, security, storage/cloud so to unleash and leverage on the potential for data analytics which is essential for the digital economy to flourish in Africa

The first step of this roadmap successful implementation by the Member States would be to fully take ownership of it, starting with its recommendations implementation and joining ITU and other stakeholders in its other key elements implementation. These roadmap key elements to pay attention to would among others be: stakeholders engagement, emerging technologies/broadband technologies, human skills and capabilities, networks interconnection, resilience/cybersecurity, standards, policy and regulation, universal access and affordability, innovation and digital labs, data technologies and big data, and overall comprehensive bankable projects implementation. Additionally, Member States are encouraged to engage with ITU and other stakeholders in the implementation of identified ongoing projects (listed in **annexes 2 and 3**). Successful implementation of these projects would not only benefit the concerned countries, but would also benefit Regional Economic Communities (RECs) and Africa as a whole. Overall, ITU would be coordinating the roadmap implementation for the countries and stakeholders and would be conducting a periodical assessment on a yearly basis to measure progress on the ground; after every new RDF, RPM or WTDC, the roadmap key elements could be readjusted to take into account any major change or development as suggested earlier.

### 3. ITU as a platform for coordination, collaboration and partnerships

For the smooth successful implementation of the roadmap, and to measure concrete achievements on the ground, ITU may serve as a platform for collaboration, partnerships and coordination. To that end, the roadmap should be seen as a living document serving ITU to guide the memberships (member states, sector members and other stakeholders) towards a fully digitalized society implementation. Among the partners, there would be key actors such as public and private sectors, funding partners, NGOs, other sister UN agencies, funding agencies, etc. As a matter of fact, the roadmap's key items implementation would be paving the way towards a fully digitalized Africa. The partners would be the pillars for the roadmap implementation success; and together, with ITU's collaboration and coordination, African countries would be able to achieve the desired fully digitalized society implementation for the benefit of their citizens.

Overall, ITU would be serving as the coordinator for this collective effort, while also being a platform for stakeholders to advance their digital transformation agendas through the implementation of existing projects and actions, while identifying and crafting of new relevant project proposals, and approaching partners for resources mobilization for their implementation. The timeline for all related major actions, projects, and recommendations implementation could be an ITU four-year cycle (i.e. from WTDC-21 to WTDC-25) with a yearly review during each Regional Development Forum (RDF).

# ANNEXES

## ANNEX 1: GLOSSARY

<b>AfCFTA</b>	: African Continental Free Trade Area
<b>AFR</b>	: Africa Region
<b>DTT</b>	: Digital Terrestrial Television
<b>GAFAM</b>	: Google, Amazon, Facebook, Apple, and Microsoft
<b>ONAR</b>	: One Network Area Roaming
<b>OP</b>	: Operational Plan
<b>PRIDA</b>	: Policy and Regulation Initiative for Digital Africa
<b>RDF</b>	: Regional Development Forum
<b>RPM</b>	: Regional Preparatory Meeting
<b>RI</b>	: Regional Initiative
<b>SDG</b>	: Sustainable Development Goal
<b>STEM</b>	: Science, Technology, Engineering and Mathematics
<b>ToC</b>	: Theory of Change
<b>USF</b>	: Universal Service Fund
<b>WTDC</b>	: World Telecommunications Development Conference

## **ANNEX 2: LIST OF PROPOSED PROJECTS FOR AFRICA REGION (list is not exhaustive and evolving)**

### **1. Project title: Enabling digital financial services to accelerate digital financial inclusion in Ethiopia**

Regional Initiative: AFR 1

Thematic Priority: Digital Services; Policy and Regulation

Budget: TBD

Possible partner(s): UNDP

Brief description:

This project aims to explore the different opportunities to support the adoption of digital financial services and accelerate digital financial inclusion in Ethiopia where cash payments are largely predominant. Previously, provision of mobile money services was limited to financial institutions and recently opened to allow non-financial institutions. The country also plans to develop a framework for mobile money and e-transactions to facilitate sustainable recovery following the impact of covid-19.

The project will involve a preliminary assessment to provide a holistic and comprehensive understanding of the current landscape. The findings of the assessment will support the establishment of best practices for digital financial inclusion, digital skills and collaborative institutional mechanisms to accelerate the adoption of digital financial services. As the use of digital payments has been fundamental for business continuity during covid-19, the project is also envisaged to contribute to the recovery phase policy measures for Ethiopia.

Status:

The draft project document has been reviewed internally. It has also been discussed with the Accelerator Lab team at UNDP country office and the Gender team at UNDP regional office respectively.

From the country office, the project proposal is still under review while the regional office has suggested to strengthen the gender component with a regional dimension and requested for terms of reference.

### **2. Project title: Advancing Digital and Data Technologies and Empowering Youth with Digital Skills for enhanced food security for Africa**

Regional Initiative: AFR 2; AFR 4

Thematic Priority: Digital Services; Capacity Development; Statistics

Budget: TBD

Possible partner(s): WFP

Brief description:

This project aims to leverage the use of digital data technologies to enable new and better sources of data, storage and aggregation offering stronger capabilities of analysing and using data. It will support improved macro agriculture intelligence for policy makers and humanitarian community against food crisis to monitor real-time agriculture and food yields at large scale and facilitate easy access to data for evidence-based decisions.

During emergencies such as covid-19 and migration, the project is envisaged to support the availability of surveillance systems for reliable analysis and measurement of food security and to forecast key valuables of interest that yield projections, supply demand mismatches, agriculture job trends, climate impact indicators, granular real time food and nutritional security maps.

The project will involve the development of a macro/national agriculture intelligence platforms to enhance macro data for decision making for policy makers and the humanitarian community. It will also enhance digital literacy, support the increased use of digital and data technologies in the agriculture value chain and contribute to the development of policies and regulations for data governance, protection, privacy and security.

Status:

The draft project document has been reviewed internally. It has also been discussed with colleagues at WFP and updated accordingly.

**3. Project title: **Enabling accessibility and usability of e-commerce to strengthen cross border digital trade within the framework of the African Continental Free Trade (AfCFTA)****

Regional Initiative: AFR 1;

Thematic Priority: Digital Services; Policy and Regulation

Budget: \$200,000

Possible partner(s): UNCTAD

Brief description:

This project aims to support e-commerce and cross-border digital trade within the framework of the African Continental Free Trade Africa (AfCFTA). The project will facilitate the leveraging of ICTs to enable intra-African trade premised on the background that different trade barriers exist on national and regional levels.

The project will involve an initial assessment to review factors that impede cross-border digital trade, identify specific skill gaps and relevant training programmes, and consolidate good practises, recommendations and guidelines to support collaborative mechanisms among countries to boost intra-African trade.

The project aims to enhance cross-border digital trade among countries and contribute to the implementation of the African Continental Free Trade Area to strengthen economic integration among African countries.

Status:

The draft project document has been reviewed internally and discussed with colleagues at UNCTAD at the regional office. The draft project proposal has been shared with UNCTAD colleagues in Geneva for additional feedback and suggestions.

**4. Project title: **Scaling up Smart Villages - Niger****

Regional Initiative: AFR 1

Thematic Priority: Digital Services; Innovation Ecosystem

Budget: \$600,000

ITU: \$100,000

Possible partner(s):

Government of Niger (National Agency for the information society-ANSI), FAO, WHO, UNESCO

Brief description:

This project aims to scale up e-services in the rural communities in Niger and promote a holistic, sustainable and whole of government approach of ICT to deliver digitally enabled services and tools for rural development through an inclusive digital transformation process.

It targets to transform 20 rural villages in Niger into smart villages and deploy ICT-enabled solutions to the villages selected by the Government of Niger following the pilot phase conducted in two villages. The project aims to improve service availability and outcomes in different sectors that include healthcare, education and agriculture among others. The smart villages will support the delivery of enhanced connectivity, economic opportunities, improve information exchange through remote communication and contribute to Niger's Sustainable Development and Inclusive Growth Strategy by improving digital connectivity, enhancing e-governance and promoting technology and innovation.

Status:

The draft project document has been prepared and submitted for review. Further discussions with the Government of Niger -ANSI are planned to agree on the next steps.

**5. Project title: Digital Farming – Grow Smart**

Regional Initiative: AFR 1

Thematic Priority: Digital Services

Budget: \$TBD

Possible partner(s): FAO

Brief description:

The project will aim to improve the efficiency and functioning of agrifood systems through digital agriculture transformation. It will support the development of national digital agriculture strategies and policies, digital agriculture innovation hubs and enable the deployment of digital agriculture services to deliver economic benefits through increased agricultural productivity and market opportunities.

By leveraging ICTs, this project will facilitate improved access to digital technologies in the agricultural sector and strengthen inclusion and resilience of rural communities. The increased use of digital platforms will also connect farmers to diverse markets to foster innovation and create digital ecosystems.

Status:

The draft project document has been prepared and submitted for review. Further discussions with FAO are planned to agree on the next steps.

**6. Project Title: Ensuring continuity of learning for the most vulnerable children and youth in Senegal using a UN COVID-19 Multi-Partner Trust Fund**

Regional Initiative:

Thematic Priority:

Budget:

Partners: UNESCO, UNICEF, UNHCR

Budget: 1,000,000USD

ITU Allocation: 100,000USD (to support extension of Internet connectivity in 2 regions)

The project aims to address the impact of school closures and educational institutions, and ensure that the right to education for all children in Senegal is upheld.

This will be achieved through the deployment of a range of distance learning solutions to accommodate different contexts and conditions, and particularly the learning needs of most marginalized children and adolescents, such as those living in rural and remote areas with limited communication and connectivity, in refugee hosting areas, and those with a disability. Emphasis will be placed on strengthening and deploying innovative learning platforms in the context of Senegal, including digital learning solutions – which offer possibilities of teacher-learner and teacher-teacher interactions and immediate adjustments to learning activities and trajectories – to support the modernization of education delivery that maximizes the potentials of new technologies and the implementation of the long-term vision of the concerned ministries.

The project will involve the following activities to be carried out by ITU:

1. A preliminary identification of schools' geographical areas where the selected marginalized and vulnerable children and youth are located in the 2 targeted regions with low connectivity in collaboration with UNESCO, UNICEF and UNCHR.
2. The findings of the schools' geographical areas identification will support mapping and matching of the coverage of 3G/4G connectivity with the spatial distribution of schools' geographical areas to identify schools' geographical areas with no Internet connectivity.
3. The project will also support the extension of broadband internet connectivity to three (3) unconnected schools' geographical areas in the 2 targeted regions to ensure vulnerable and disadvantaged children and their teachers have access to the internet. Following sub-activities will be undertaken:
  - a. Establishment of a partnership agreement with a telecom operator to extend internet connectivity to the three unconnected schools' geographical areas in the 2 targeted regions
  - b. Finalization of contractual arrangements with the telecom operator on extending and improving internet connectivity and access to three unconnected schools' geographical areas in the 2 selected regions.

## **7. Project Title: ICT Benchmarking in Central Africa**

Regional Initiative:

Thematic Priority:

Partners: COFED

Budget: 1,000,000 EUR

ITU Allocation: 300,000 EUR

Brief description :

The overall objective of the COFED programme is to improve the sustainability of investments and ensure greater efficiency in regional and national economic infrastructure for transport, energy and ICT through strengthened governance in these sectors. Its specific ICT objective is strengthened governance.

Within this framework, the objective of the project is to improve the competitiveness of economies in Central Africa and social development by strengthening the legal and administrative conditions for the implementation of ICTs, as well as the transparency and governance of ICT infrastructures.

The main expected results are:

- Studies and research both for the coordination and for the preparation of the analysis / benchmarking of national situations are carried out.
- The coordination of the benchmarking exercise between the various stakeholders is reinforced.
- The exchange and dissemination of good practices on benchmarking are strengthened.
- The Virtual ICT Observatory for the countries of Central Africa is defined.

Status: Signing process ongoing

The PRODOC is reviewed by COFED for signing approval process.



## ANNEX 3: DETAILED PRESENTATION OF GIGA AND PRIDA PROJECTS

### 1. Project title: Giga: Connecting Every School to the Internet

**Giga, a UNICEF and ITU initiative, to connect every school to the internet, and every young person to information, opportunity, and choice.** Giga is highlighted in the **UN Secretary General’s Roadmap for Digital Cooperation Action Plan** as a Key Way Forward to achieve Universal Connectivity<sup>1</sup>, whilst also supporting the recommendation that there is a broad, multi-stakeholder alliance to create a platform for sharing Digital Public Goods.

**Providing connectivity to the world remains a challenge.** According to the ITU, nearly 3.7 billion people in the world do not have access to the Internet. The lack of access to the Internet means exclusion, marked by the lack of access to the wealth of information available online, fewer resources to learn and to grow, and limited opportunities for the most vulnerable children and youth to fulfil their potential. Closing the digital divide requires global cooperation, leadership, and innovation in finance and technology.

Giga has four pillars:



**Map** – In partnership with governments, Giga is mapping connectivity demand, using schools as a base point, and identifying where there are connectivity gaps. This information, combined with existing ITU mapping data, allows countries to take stock of their existing infrastructure and determine wired and wireless availability when assessing appropriate solutions for connecting schools. Already more than 800,000 schools in 30 countries have been mapped, and are viewable live at [www.projectconnect.world](http://www.projectconnect.world)



**Finance** – Giga is working with governments and advising them on building affordable and sustainable country specific models for finance and delivery, subsidizing market creation costs and incentivizing private sector investment.



**Connect** – In partnership with industry, and based on the mapping results, Giga will determine the best possible technical solutions available to provide schools with required connectivity, and countries with safe, secure, reliable, fit for purpose infrastructure to support future digital development needs. This includes determining the best possible solutions for last mile connectivity.



**Empower** - Building on the work of UNICEF’s Reimagine Education and Generation Unlimited, along with ITU’s work in digital skills training, Giga will connect governments with the best-suited partners to ensure digital learning content and platforms are available for scaling, as per a country’s development priorities and in coordination with the broader national digital strategy. The focus is on, but not limited to, information and skills to children, teachers, and administrators.

Additional details on Giga's four-pillar framework can be found in the Broadband Commission report on "[The Digital Transformation of Education: Connecting Schools, Empowering Learners](#)".

### **Why is this possible now?**

- 1. Financing:** New global financing instruments built can be more sophisticated than the advanced market commitments of GAVI
- 2. Connectivity technology:** Connectivity expansion through low earth orbit satellites and mesh technologies now make building coverage easier
- 3. Accountability:** We have new ways to transparently monitor progress and ensure service continuity (e.g. blockchain)
- 4. Focus:** Concentrating on "schools" as an entry point for bid construction gives us a laser-focus and a unique "edge" to bring connectivity investments into target communities

### **Country Engagement & Partners**

In Africa Giga is working with partners such as Softbank, Ericsson, Dubai Cares and the UK FCDO to map and connect schools. Countries in Sub-Saharan Africa that have already joined forces with Giga include Kenya, Niger, Rwanda, Sierra Leone and Zimbabwe.

Only by working together can Giga succeed. Giga welcomes engagement and leadership from governments, businesses, civil society, technology providers, donors, investors and finance experts. You can find out more information at [www.gigaconnect.org](http://www.gigaconnect.org)

### **2. Project title: PRIDA**

**The objective of the ITU managed "PRIDA "(Policy and Regulation Initiative for Digital Africa) project is to facilitate efficient and harmonized spectrum utilization to contribute to the overall objective of the PRIDA EU+AUC+ITU Action, which is to foster universally accessible, affordable and effective wireless broadband across the continent to unlock future benefits of internet based services.**

# What is PRIDA

## Objective:

To foster universally accessible and affordable broadband across the continent

Duration:  
42 Months

Budget  
€ 8m

(EU € 7.5m and ITU € 0.5m)



It is joint initiative by the EU, AU and the ITU



## PRIDA deliverables so far

Deliverable	Type	
• PRIDA PMP (Project Management Plan)	Project Management	✓
• 1.1 Analysis of the current legislative and regulatory framework and the usage of spectrum as of today as well as in the foreseeable future.	Technical Report	✓
• 1.2 Guidelines on radio frequency regulation based on ITU Radio Regulations, ITU-R Recommendations, Reports and Handbooks, regional harmonization frameworks, case studies, country experiences and regional consultations. <b>235 pages.</b>	Technical Report	✓
• 1.3 Spectrum Management Guidelines for the Introduction of IMT in Africa. <b>256 pages.</b>	Technical Report	✓
• 3.1&3.2 REPORT ON THE ASSESSMENT OF THE CURRENT CROSS-BORDER COORDINATION AGREEMENTS IN AFRICA.	Technical Report	✓
• 3.1&3.2 REPORT ON THE ASSESSMENT OF THE CURRENT VERSION OF THE HARMONIZED CALCULATION METHOD FOR AFRICA (HCM4A).	Technical Report	✓
• A Gender Sensitivity Review of the PRIDA Project.	Technical Report	✓
• 8 capacity building workshops	Capacity building	✓
• Global PRIDA website	Communication	✓
• 4 PRIDA videos	Communication	✓
• PRIDA ITU web page	Communication	✓
• Communication gadgets (500 bags, umbrellas, pens, caps)	Communication	✓

