



جهاز تنظيم الاتصالات والبريد
TELECOMMUNICATIONS AND
POST REGULATORY AUTHORITY

COOPERATION AGREEMENT

BETWEEN

INTERNATIONAL TELECOMMUNICATION UNION

AND

TELECOMMUNICATION AND POST REGULATORY AUTHORITY OF SUDAN, ON
BEHALF OF THE GOVERNMENT OF SUDAN

TO

SET UP A REGIONAL ITU IPv6 AND IoT EXPERTISE CENTRE FOR THE ARAB REGION

THIS COOPERATION AGREEMENT (hereinafter referred to as "**Agreement**") is entered into by and between:

THE TELECOMMUNICATION AND POST REGULATORY AUTHORITY OF SUDAN ("TPRA"), the Telecommunication Regulatory Authority of Sudan based on Khartoum – TPRA Tower – PB Box: 2869, acting on behalf of the Government of Sudan;

THE INTERNATIONAL TELECOMMUNICATION UNION ("ITU"), an intergovernmental organization and the specialized agency of the United Nations for information and communication technologies (ICTs), having its Headquarters located at Place des Nations, CH-1211, Geneva 20, Switzerland.

For purpose of this Agreement, TPRA and ITU, shall hereinafter referred to collectively as "**Parties**" and individually as a "**Party**").

WHEREAS:

- A. The ITU is active in areas including broadband Internet, latest-generation wireless technologies, aeronautical and maritime navigation, radio astronomy, satellite-based meteorology, convergence in fixed-mobile phone, Internet access, data, voice, TV broadcasting, and next-generation networks.
- B. The ITU is promoting IPv6 and IoT partnerships aimed at mobilizing key stakeholders to finance, plan, build, operate and maintain IPv6-based IoT infrastructure, establish IPv6-IoT Center of Expertise and conduct trainings on these issue within beneficiary countries.
- C. TPRA is a government entity established to bring growth of technology and science related to areas like IPv6 and has well established virtual IPv6 Lab and knowledgeable staff on IPv6 areas. TPRA is also now focusing on Industry 4.0 related courses, of which, IoT is a major component.
- D. Parties desire to cooperate with each other under this Agreement for the purpose of implementing a project to set up a regional ITU IPv6-IoT Expertise Center for the Arab region (the "IPv6-IoT Expertise Center"), which is further described in the Project Document (as defined below) attached as Annex 1 to this Agreement (such project is hereinafter referred to as, the "Project").
- E. For the purpose of implementing the Project, each of the Parties desires to make certain cash and/or in-kind contributions subject to and in accordance with the terms and conditions of this Agreement and the Project Document.
- F. In achieving the objectives of this Agreement, the Parties shall work within the parameters of their respective laws, constitution, regulations and/or policies.



CONSIDERING the *Note Verbale* received by ITU from the Permanent Mission of the Republic of the Sudan to the United Nations Office in Geneva (attached as Annex 2 to this Agreement), according to which the Government of the Sudan is committed to apply by analogy the provisions of the 1946 Convention on the Privileges and Immunities of the United Nations to the ITU, in the context of the Project.

NOW, THEREFORE, the Parties agree as follows:

ARTICLE 1

PURPOSE OF THIS AGREEMENT; IMPLEMENTATION OF THE PROJECT

- 1.1 The purpose of this Agreement establishes the general terms and applicable to, as well as the Parties' respective rights, roles and responsibilities concerning, the implementation of the Project.
- 1.2 The specific terms and conditions applicable to the implementation of the Project, as well as any other rights, roles and responsibilities of each of the Parties (in addition to those already contained in this Agreement) in connection with the Project, shall be set forth in a written project document in respect of the Project which shall be mutually agreed to and signed by both of the Parties (the "Project Document").
- 1.3 Upon signature of the Project Document by both Parties, in accordance with Section 8.2 below, the Project Document shall come into force and effect, shall be annexed to this Agreement as Annex 1 hereof, and shall constitute an integral part of this Agreement. The Project Document shall be subject to and construed in accordance with the terms and conditions of this Agreement.
- 1.4 The Parties shall cooperate with each other to implement the Project, subject to and in accordance with the respective terms and conditions of this Agreement and the Project Document.

ARTICLE 2

CASH CONTRIBUTION; FINANCIAL PROVISIONS

- 2.1 For the implementation of this Agreement and the Project, TPRA shall make to ITU a cash contribution of one hundred thousand US Dollars (USD 100,000) (hereinafter referred to as the "TPRA Contribution") within 30 days following the signature by both Parties of this Agreement. For the implementation of this Agreement and the Project, ITU shall allocate an amount equal to one hundred thousand US Dollars (USD 100,000 from regional initiatives budget) (hereinafter referred to as the "ITU Contribution", and, collectively with the TPRA Contribution, the "Contributions").
- 2.2 The TPRA Contribution shall be deposited to the ITU's United States Dollars (USD) account set out in this paragraph:

UBS Switzerland SA
Case Postale 2600
CH - 1211 Genève 2, Switzerland
Account Holder: International Telecommunication Union
SWIFT CODE: UBSWCHZH80A
Account No.: 240-C8108400.2
IBAN: CH54 0024 0240 C810 8400 2
Purpose: Project Regional IPv6 and IoT Expertise Center-Sudan



- 2.3 The Contributions shall be used by ITU for the implementation of the Project, as described in the Project Document attached as Annex 1 to this Agreement.
- 2.4 Under no circumstances shall ITU have any obligation to take or omit to take any action, including, without limitation, incur any cost, expense or commitment in connection with the Project, before ITU has received the TPRA Contribution in full.
- 2.5 The Contributions and the Project financed therefrom shall be administered by ITU in accordance with the applicable ITU Rules, Regulations and Procedures. Accordingly, personnel shall be engaged and administered, equipment, supplies and services shall be purchased, and contracts shall be entered into, in each case, subject to and in accordance with the provisions of such Rules, Regulations and Procedures.
- 2.6 All financial accounts, reports and statements with respect to the Contributions or the Project financed therefrom shall be expressed in United States Dollars.
- 2.7 ITU shall charge an administrative and operational services (AOS) cost of 10% on any and all expenditures made by ITU from the funds of the TPRA Contribution. The estimated amount of such AOS cost shall be set forth in the estimated budget for the Project, which is contained in the Project Document.
- 2.8 Any funds from the TPRA Contribution remaining unused after the completion of the Project, shall be used in a manner decided by mutual written agreement between the Parties. Any funds from the ITU Contribution that remain unallocated and/or unused following the completion of the Project shall be used in a manner to be decided exclusively by ITU.
- 2.9 The Contributions will be subject to the internal and external-auditing procedures laid down in the ITU Financial Rules, Regulations and Procedures.
- 2.10 ITU shall provide TPRA with a final expenditure report concerning the Project, prepared in accordance with ITU's relevant accounting and reporting rules, regulations and procedures, promptly after the definitive financial situation with respect to the Project is ready (i.e. approximately six (6) months after the closure of account of the year in which the Project is completed in its entirety).
- 2.11 The Parties shall use their reasonable efforts to implement the Project in accordance with the Project Document (in particular, but without limitation, the Project's budget set forth therein). In the event that the Contributions shall not be sufficient to defray all costs and expenses associated with the Project, the scope and/or budget of the Project shall be reviewed and adjusted, as necessary, by the Parties pursuant to a mutual written agreement signed by both of the Parties, in order to ensure that such costs and expenses shall not exceed the Project's budget.
- 2.12 ITU shall have no liability or obligation arising from or relating to: (i) any failure or delay by TPRA in making the TPRA Contribution in full; (ii) any breach, default, violation or non-compliance by TPRA or any third party in relation to this Agreement, the Project Document or any other agreement, document or instrument arising therefrom or relating thereto; or (iii) any action or omission by TPRA or any third party; and TPRA shall indemnify, defend and hold harmless (including, without limitation, by way of advance payment by TPRA of ITU's relevant costs and expenses) each of ITU and its officials from and against any such liabilities or obligations.



**ARTICLE 3
IN-KIND CONTRIBUTIONS**

- 3.1 For the implementation of this Agreement and the Project, each of the Parties shall make, as and when required under the Project Document, the in-kind contributions (if any) that are specified in respect of such Party in the Project Document attached as Annex 1 to this Agreement.
- 3.2 The respective in-kind contributions of the Parties referred to above shall be used solely for the implementation of the Project, as described in the Project Document.

**ARTICLE 4
TRANSFER OF OWNERSHIP OF EQUIPMENT**

The Parties acknowledge and agree that all rights, titles, liabilities and obligations in and to any Equipment (as defined herein) shall automatically and immediately be transferred to and assumed by TPRA or any relevant third party beneficiary as of the earliest date by which such Equipment has been delivered to, and has been accepted, acknowledged as received, used or operated by, TPRA or such third party beneficiary. For purposes of this Agreement, the term "Equipment" means any and all hardware, materials, accessories, tools, supplies and equipment that are purchased, acquired or delivered as part of the implementation of the Project.

**ARTICLE 5
EXEMPTIONS, CONSENTS AND PERMITS**

- 5.1 Pursuant to Section 9 of the Convention on the Privileges and Immunities of the Specialized Agencies, adopted by the General Assembly of the United Nations on 21 November 1947 (the "1947 Convention"), ITU is exempt from (i) all direct taxes (except charges for public utility services), and (ii) all customs duties and prohibitions and restrictions on (a) imports and exports in respect of articles imported or exported by ITU for its official use and/or (b) ITU's publications. At all times during the term of this Agreement and the implementation of the Project, TPRA shall take all necessary actions to ensure, at its sole cost and expense, that ITU shall be exempt from all such taxes, duties, prohibitions and restrictions by applying by analogy and without reservations the privileges, immunities and facilities established by the provisions of the 1946 Convention on Privileges and Immunities of the United Nations adopted by the General Assembly of the United Nations on 13 February 1946, to which the Republic of Sudan is a party since 21 March 1977.
- 5.2 At all times during the term of this Agreement and the implementation of the Project, at its sole cost and expense, TPRA shall timely issue and deliver in writing, or obtain the timely issuance and delivery in writing of, any and all consents, permits, licenses, visas, authorizations, certificates, attestations, confirmations, documents or other instruments which may be necessary or required to be obtained by ITU or any of its officials, employees, consultants or contractors in connection with the implementation of this Agreement or the Project and/or to give effect to any exemptions, privileges, immunities or other facilities which ITU or any of its officials enjoy by virtue of the international agreements and national laws applicable to ITU.



**ARTICLE 6
FORCE MAJEURE**

- 6.1 If a Party is rendered unable, whether in whole or in part, by Force Majeure (as defined below) to carry out its obligations under this Agreement or the Project Document, such Party shall provide the other Party prompt written notice thereof, describing the Force Majeure in reasonable detail.
- 6.2 Promptly after such notice, the Parties shall jointly assess the impact of such Force Majeure on the successful implementation of this Agreement or the Project, and shall mutually determine, as necessary and pursuant to written agreement(s): (i) the scope and duration of any suspension or extension periods necessary in respect of any activities, roles or responsibilities of any of the Parties to be performed under this Agreement or the Project Document; or (ii) the termination of this Agreement and/or the Project Document, in which case the provisions of the Article on "Amendment; Termination" of this Agreement shall apply.
- 6.3 Neither Party shall be deemed to be in breach, violation or default of its obligations under this Agreement or the Project Document while the performance of such obligations is suspended, delayed or prevented (in each case, pursuant to and in accordance with the provisions of this Article) as a result of such Force Majeure. No indemnity shall be claimed by a Party under this Agreement arising from or relating to any Force Majeure.
- 6.4 For purposes of this Agreement, "Force Majeure" means industrial disturbance, act of public enemy, war, public riot, fire, storm, flood, earthquake, explosion or any other act, event or occurrence which is reasonably unforeseeable, which is not caused by or under the control of any Party, and which cannot be avoided, prevented, overcome or mitigated by any Party despite the exercise of reasonable care and diligence.

**ARTICLE 7
NOTICES**

- 7.1 Any notices to be given by a Party to the other Party in connection with this Agreement shall be in writing and shall be deemed as effectively given only if (i) hand-delivered; (ii) sent by registered mail, with acknowledgment of receipt; or (iii) sent by fax or e-mail with confirmation of receipt, in each case, to the other Party's address set forth below. Any such notice shall become effective on the date of its receipt by the Party to which it is addressed. The address or contact person of a Party may be changed by appropriate notice given to the other Party in accordance with this Section.
- 7.2 Any notices and other communications to TPRA shall be addressed to:

Telecommunication and Post Regulatory Authority of Sudan (TPRA)
Attention: Eng. Ahmed Tajelsir ATYA, IPv6 & IoT Projects Coordinator, Licensing and Numbering
Department
TPRA Tower PO Box 2869 Khartoum Sudan
Telephone: +249187171277
E-mail: ahmed.atyya@tpra.gov.sd



7.3 Any notices and other communications to ITU shall be addressed to:

International Telecommunication Union
Telecommunication Development Bureau (BDT)
Attention: Mr. Slaheddine Maaref, Regional Director a.i., ITU Regional Office for the Arab States
Place des Nations
1211 Geneva 20
Switzerland
Telephone: +41 22 730 5421
Fax: +41 22 730 5527
E-mail: bdtmail@itu.int

ARTICLE 8
ENTRY INTO FORCE; DURATION; SIGNATURE

- 8.1 This Agreement shall enter into force and become effective upon the date of its signature by both Parties. The provisions of this Agreement shall remain applicable until all of the respective rights and obligations of the Parties have been fulfilled in accordance with its terms and conditions of this Agreement and the Project document.
- 8.2 This Agreement and the Project Document may be executed in one or more counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument. This Agreement and the Project Document may be executed using electronic or facsimile signatures.

ARTICLE 9
AMENDMENT; TERMINATION

- 9.1 The provision of this Agreement or any of its Annexes (including, without limitation, its Project Document) may be extended or modified by written amendment agreed to, and signed by, both Parties. Any such amendment shall be annexed to the present Agreement and shall form an integral part hereof.
- 9.2 This Agreement may be terminated by either Party, with or without cause, by providing written notice thereof to the other Party at least thirty (30) days prior to the effective date of such termination.
- 9.3 In the event this Agreement is terminated in accordance with this Article, the Parties agree that (i) any and all costs, expenses and commitments incurred or made by ITU in connection with this Agreement or the Project prior to the effective date of and/or in connection with such termination shall be charged against the TPRA Contribution; and (ii) such termination shall not release any Party from any of its rights or obligations that have accrued prior to, and that are required to survive, such termination.



ARTICLE 10
ENTIRE AGREEMENT; ANNEXES

- 10.1 This Agreement, together with all Annexes hereto (including, without limitation, the Project Document), constitutes the entire agreement and understanding of the Parties with respect to the subject matter hereof and thereof, and supersedes all prior agreements, arrangements, communications, negotiations, proposals and other understandings, whether written or oral, between the Parties with respect to such subject matter.
- 10.2 All Annexes attached to this Agreement form an integral part hereof. In the event of any conflict or discrepancy between this Agreement, on the one hand, and any of its Annexes, on the other hand, the terms and conditions of this Agreement shall govern and control in all respects and for all purposes.

ARTICLE 11
ASSIGNMENT; BINDING EFFECT

- 11.1 Neither Party may transfer, pledge, assign or otherwise dispose, whether in whole or in part, of any of its rights or obligations under this Agreement or the Project Document, in each case, without the prior written consent of the other Party.
- 11.2 Notwithstanding the foregoing to the contrary, ITU shall have the right and option, exercisable in ITU's discretion, to subcontract the performance of any of its roles or obligations arising from or relating to this Agreement or the Project Document.
- 11.3 This Agreement, together with all Annexes hereto, shall be binding upon and inure to the benefit of the Parties and their respective successors and permitted assigns.

ARTICLE 12
INTELLECTUAL PROPERTY

- 12.1 For the purpose of this Agreement, "Intellectual Property" or "IP" means all intellectual and industrial property rights throughout the world; "Project Materials" means any tangible or intangible materials, including publications, reports, or other documentation, which are created in the context and for the purpose of implementing the Project. Project Materials include any and all modifications to, or derivative works of the foregoing materials.
- 12.2 The Parties hereby acknowledge that all title and ownership, including copyright, to all Project Materials specifically developed by one of the Parties during the performance of this Agreement shall be assigned to ITU. Any pre-existing IP and any IP that is developed outside of the implementation of the Project and that is contributed to the Project Materials by a Party, shall be owned and retained by the respective Party. ITU shall grant to TPRA a limited, perpetual, non-exclusive, worldwide royalty-free license to use and distribute the Project Materials for non-commercial purposes. The Parties acknowledge and agree that TPRA shall ensure that it has secured all appropriate licenses and permissions from the owner of third-party IPs, prior to suggesting to ITU the incorporation of such third-party IP's in any Project Material.



**ARTICLE 13
SETTLEMENT OF DISPUTES**

Any dispute between the Parties arising from or in connection with this Agreement or the Project Document shall be resolved by amicable direct negotiations between the Parties. In case of failure of such negotiations, the dispute shall be settled by a sole arbitrator to be nominated at the request of either Party by the Court of Arbitration of the International Chamber of Commerce (ICC). The place of arbitration shall be Geneva, Switzerland. The language of the arbitration shall be English. The arbitration shall be carried out in accordance with the Rules of Arbitration of the International Chamber of Commerce, as presently in force. The applicable substantive law shall be Swiss law. The arbitrator's ruling shall be binding and final upon the Parties, and any recourse against such ruling by or before any court or tribunal is hereby expressly and irrevocably waived and excluded by each of the Parties.

**ARTICLE 14
ANTI-CORRUPTION PROCEDURES AND INVESTIGATIONS**

- 14.1 The Parties will consult with each other in respect of any matter that may arise from or in connection with fraudulent and corrupt practices and conflicts of interest with respect to this Agreement.
- 14.2 All allegations of corruption will be investigated promptly and, where confirmed, appropriate follow-up action will be initiated without delay by TPRA in accordance with its applicable policies, procedures and guidelines, where such allegations involve TPRA staff and/or activities, and by ITU in accordance with its applicable policies, regulations and rules, where such allegations involve ITU staff and/or activities.
- 14.3 The Parties will facilitate each other in investigations and follow up actions against the allegations of fraud and corruption.

**ARTICLE 15
PRIVILEGES AND IMMUNITIES**

- 15.1 ITU is an intergovernmental organization and a United Nations specialized agency and, as such, enjoys the privileges, immunities and facilities derived from this status, as recognized by the applicable international agreements and by relevant national laws.
- 15.2 Nothing contained in or relating to this Agreement or the Project Document shall be deemed or construed as a waiver, whether express or implied, of any privileges, immunities or facilities which ITU or any of its officials enjoys by virtue of the international agreements and national laws applicable to ITU.

IN WITNESS WHEREOF, the Parties have caused their duly authorized representatives to sign this Agreement, in one electronic copy in the English language, as of the date(s) set forth below.

FOR THE TELECOMMUNICATION AND
POST REGULATORY AUTHORITY OF SUDAN
(on behalf of the Government of Sudan)

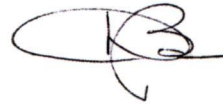


.....
Dr. El Sadig Gamaleldeen
Director General
TPRA-Sudan

Date: 17 May 2020

Place: Khartoum, Sudan

FOR THE INTERNATIONAL
TELECOMMUNICATION UNION



.....
Mrs. Doreen Bogdan-Martin
Director
Telecommunication Development Bureau

Date: 5 May 2020

Place: Geneva, Switzerland



Annex 1 to the Cooperation Agreement between the Telecommunication Regulatory Authority of Sudan
and International Telecommunication Union



Project Number:
Project Title: Regional ITU IPv6 and IoT Expertise Centre for Arab region
Start Date: 01 July 2020
Estimated End Date: 31 December 2022
Government Coop. Agency: Telecommunication Regulatory Authority of Sudan (TPRA)
Implementing Agency: International Telecommunication Union (ITU)
Beneficiary Countries: Arab Region
Project Manager: Mr. Mustafa Al Mahdi

Summary of Contributions (USD)			
A) Project Budget			
Description	Total	ITU	TPRA
Creation of IPv6 & IoT center	20,000	10,000	10,000
IPv6 & IoT Trainings	35,000	20,000	15,000
Documentation and strategies developments	30,000	15,000	15,000
Equipment and Software	45,000	25,000	20,000
Fellowships	40,000	20,000	20,000
Evaluation	10,000	5,000	5,000
Missions	10,000	5,000	5,000
Misc.	909		909
Sub-Total	190,909	100,000	90,909
AOS (10%)	9,091		9,091
Total:	200,000	100,000	100,000
B) Cost Sharing			
ITU Cash Contribution = 100 000 USD (Council funds for Regional Initiatives Projects)			
TPRA Cash Contribution= 100 000 USD			

Brief Description:

The World Telecommunication Development Conference 2017 stipulated five priority areas of work for ITU in the Arab States Region under the ARB Regional Initiatives (ARB RI). ARB RI 4 titled "Internet of Things, Smart Cities and Big Data" aims to raise and spread awareness of the importance of future challenges in the era of the Internet of Things (IoT) and Big Data, and how to address such challenges; establish regulatory frameworks and take measures to help cope with the rapid changes in the field of telecommunications and information technology; and work to ensure the transition to smart cities and communities (SCCs). This project aims at assisting ITU Member States in the Arab region in transitioning from IPv4 (Internet Protocol version 4) to IPv6 (Internet Protocol version 6) for Internet of Things (IoT).

For the	Signature	Date	Name/Title
International Telecommunication Union:		5 May 2020	Mrs. Doreen Bogdan-Martin Director Telecommunication Development Bureau
Telecommunication Regulatory Authority of Sudan:			Dr. El Sadig Gamaleldeen Director General

1. BACKGROUND & CONTEXT

1.1. CONTEXT

Information and Communication Technologies (ICTs) in general and Internet, in particular, play a critical role in all aspects of human life: many governmental, business and social services and applications are available on the Internet.

The World Summit on the Information Society (WSIS) plan of action foresees the establishment of people-centered, inclusive and development-oriented information Society, where everyone can create, access, utilize and share information and knowledge, enabling individuals, communities and peoples to achieve their full potential in promoting their sustainable development and improving their quality of life¹. This can be achieved only by deploying appropriate updated and innovative technologies and solutions in all places around the world taking into consideration the UN SDGs (Sustainable Development Goals).

The ITU-led "Connect the World" initiative is an excellent example of the role of multi-stakeholder partnerships in bridging the digital divide. ITU has forged partnerships with some of the leading public and private sector organizations of the world towards the implementation of these initiatives.

ITU is poised to play a key role in helping to achieve SDG 9 including Goal 9c to "significantly increase access to ICT and strive to provide universal and affordable access to Internet in the LDCs (least-developed countries) by 2020".

The seventh World Telecommunication Development Conference (WTDC-17) of the International Telecommunication Union (ITU) was held from 9 to 20 October 2017 in Buenos Aires, Argentina. WTDC17 gave the membership the opportunity to debate the latest trends in telecommunication/ICT development and to establish the priorities of the ITU Telecommunication Development Sector (ITU-D) for the interval between two WTDCs. During this WTDC-17, the Arab states adopted five regional initiatives and one of them is the regional initiative on Internet of things, smart cities and big data. Within the framework of the implementation of this regional initiative, this project aims at creating and promoting an enabling environment for the transition to IPv6 based networks and enhance deployment of IoT in Arab region. Prospective activities of the project include train the staff from Arab region on fundamental and advance of IPv6 and IoT, implement strategic plans and regulatory frameworks to keep up with the age of Internet of things. Moreover, the project aims at promoting a wide scale deployment of innovative IPv6 and IoT in the Arab region to ultimately contribute to the achievement of the UN's Sustainable Development Goals (SDGs) as well as the New Urban Agenda (NUA) in the Arab Region.

Within the framework of its mandate and activities, BDT is proposing IPv6/IoT Countries readiness assessment and the enhancement of capacities of Arab countries specifically Arab Least Developed Countries (LDCs), Low Income Countries (LICs) to support the provision of Internet-

¹Geneva declaration of principles- World Summit on the information Society (WSIS) Outcome Documents, Geneva 2003- Tunis 2005.



based services through the use of IPv6 / IoT infrastructures, applications and services for the beneficiary countries.

1.2. PROBLEM STATEMENT

- Internet Protocol version 6 (IPv6) is a version of the Internet Protocol (IP) intended to succeed Internet Protocol version 4, which currently directs almost all Internet traffic in LDCs/LICs and other developing countries in the Arab region, but it is running out of addresses. To gain the full benefits of IPv6, most hosts on the Internet, as well as the networks connecting them, will need to deploy this new IP version—a difficult transition;
- While deployment of IPv6 is accelerating, especially in the Asia-Pacific region and some European countries, areas such as the Americas and Africa are comparatively lagging in deployment of IPv6;
- Extending infrastructure to all locations is a daunting and expensive task, as the relevant equipment is mostly outdated and needs replacement;
- Lack of expertise in IPv6 / IoT issues slows the process of bridging digital divide for development in the Arab region;
- Lack of IoT data culture (policy makers, industry leaders and executives, developers, data champions);
- Need for supporting policies and regulations around enabling environment of IoT and IPv6 Data (data availability, open data, data sharing, data collection);
- Need for sensitizing IoT developers, startups and SMEs on the regional and local challenges with regards to their involvement in the design and development and deployment of IPv6 based infrastructure for IoT applications and services.

1.3. ITU ACTIVITIES RELATED TO IPv6 / IoT DEPLOYMENTS

Infrastructure is central for enabling universal, sustainable, ubiquitous and affordable access to ICTs and services for all. The ICT sector is characterized by rapid technological change, and by convergence of technological platforms for ICT/Telecommunications, information delivery, broadcasting and computing.

WTDC Resolution 63 (Rev. Buenos Aires, 2017) on IP address allocation and encouraging the deployment of IPv6 in developing countries has instructed the following:

- to continue the close cooperation and coordination with the Director of the Telecommunication Standardization Bureau in this regard, and to continue ongoing activities to facilitate the process of raising awareness on IPv6 deployment among all members, and to provide the necessary information on training and education activities;
- to continue cooperating with relevant international and regional organizations, including the Regional Internet Registries (RIRs), on capacity building and the enhancement of technical skills for IPv6 in order to respond to the needs of developing countries;
- to submit an annual report to the ITU Council on the progress made in this regard, and report to the next WTDC;
- to develop guidelines, to enable, if necessary, adjustment of the organizational frameworks and policies necessary for migration to and deployment of IPv6.

The ITU membership has also adopted PP Resolution 180 on facilitating the transition from IPv4 to IPv6 and PP Resolution 197 on facilitating the Internet of Things to prepare for a globally

connected world. An annual Report is prepared for ITU Council to reflect the progress made on those Internet activities including IPv6, capacity building on internet governance and other issues related to internet.

1.4. BENEFICIARY COUNTRIES

While the Project aims at serving all 22 countries in the ITU Arab Region, Sudan was selected to be host for this regional project based on the following criteria:

- Sudan is one of the Least Developed Countries (“LDCs”) in Arab Region;
- Sudan requested assistance from ITU/BDT on the use of ICTs for the socio-economic benefits of their population (selection must be demand-driven);
- Sudan has on-going activities to address the policy, legislative and regulatory requirements for IPv4-IPv6 transition and IoT strategies;
- Sudan has started projects on IPv6 and IoT deployments and has requested BDT assistance on ITU expertise on the development and delivery of capacity building and skills development on areas of IoT and update the current curriculum content it has on IPv6 to cope with IoT applications and services diffusion demand;
- Sudan has established a virtual IPv6 training center;
- Sudan had successfully implemented the ITU-TRA/UAE Capacity Building project on IPv6 for Arab LDCs and Palestine (project closed by Feb 2018) with remarkable results [28 staffs from 7 LDCs, 4 for each country became certified IPv6]. One of the recommendations was that this experience and best practices should be replicated to benefit more ITU members in the Arab region.

1.5. CAPACITY REQUIREMENTS

The implementation of this Project requires the appropriate policy framework and a facilitating environment for using the required technology and providing the support for such services. It also needs human, technical and financial resources, appropriate technology (hardware and software) and efficient management practices. To meet the objectives, there must be on-going monitoring, and evaluation to meet the changing user needs and service requirements.

1.6. IMPACT

- Countries’ infrastructure is updated and ready for new IPv6-based IoT application, services and solutions;
- Knowledge is shared and awareness is raised so that beneficiary countries are not left behind in the evolution of ICTs;
- Assistance to governments and industry leaders on policies, strategies and regulations in addition to the capacity building programmes will ultimately lead to the creation of enabling environments for IPv6 & IoT.

2. OVERALL PROJECT OBJECTIVES

The main objective of the Project is to set-up a regional ITU IPv6 and IoT Expertise Centre for the Arab region (in accordance with the relevant KPIs below) for enabling universal, sustainable, ubiquitous and affordable access to ICTs and services for all. Through the creation of this centre the project further aims to achieve the following objectives:

- a) Contribute to IPv6 and IoT deployment – countries readiness assessment;
- b) Accelerate human capacity building and digital skills to better facilitate IPv4-IPv6 transition and IoT related applications development and deployments;
- c) Establish IPv6 Taskforces to facilitate in drafting national plans on IPv6 deployment;



- d) The center will serve as regional center to support the development and deployment of IPv6 and IoT infrastructure in the Arab region;
- e) Attract the IPv6 implementers and IoT applications developers;
- f) Development of IPv6 and IoT strategic plans and regulatory frameworks for selected countries in the Arab Region.

3. EXPECTED RESULTS

By implementing this project, the following results and benefits are expected:

- 3.1 Establishment of one regional ITU IPv6 and IoT Expertise Center in Arab region hosted by Sudan (TPRA);
- 3.2 Provision of assistance in the smooth transition from IPv4 to IPv6, particularly in the context of IPv6 and IoT based networks at regional/national level including development of assistance for deployment of IPv6-IoT strategies;
- 3.3 At least 22 professionals are trained on IPv6 and IoT from each of the Arab countries; and at least four professionals become certified on IPv6 and IoT from each of the selected countries in the Arab Region;
- 3.4 The establishment of a national task force on IPv6 and IoT deployment by the selected country's trained professionals who will become part of the IPv6 Group ITU mailing list community to ensure continued promotion of IPv6 and IoT deployments in the Arab region. The national IPv6 taskforce will be responsible for the elaboration of the national strategy on IPv6 and IoT in respective country/s;
- 3.5 Each national task force would be able to share their national IPv6 and IoT deployment strategy with the IPv6 ITU group, the group will assist by providing constructive ideas and sharing relevant experiences on IPv6 deployment;
- 3.6 Regional training courses on IPv6 and IoT to be conducted.
- 3.7 Regional IPv6 and IoT Hackathon to be organized to accelerate IPv6/IoT solutions availability and finding creative and innovative new ways to help promote IPv6/IoT adoption and deployment in the Arab region, particularly in Sudan.

The following KPIs table will be used for the measurement of the achievement of the expected results:

Result	Key Performance Indicators	Target
3.1	Number of IPv6 & IoT Expertise Centers established	1
3.2	Number of countries assisted in developing national strategies for transition from IPv4 to IPv6, IoT, IPv6-IoT based networks in the Arab Region	4
3.3	Number of professionals trained from Arab countries	22
	Number of professionals from Arab region who become certified on IPv6 and IoT (basics and advanced)	4
3.4	Establishment of national task forces	4
3.5	Number of shared national IPv6 and IoT deployment strategy and sharing of relevant experiences	4
3.6	Number of training courses on IPv6 and IoT to be conducted on IPv6 and IoT (basics and advanced)	4 (2 basic and

		2 advance) for each IPv6 and IoT topic
3.7	Number of Regional Hackathon on IPv6 and IoT to be conducted	2

4. THE PROJECT ACTIVITIES

The regional IPv6 and IoT Expertise Center, in partnership with other interested entities, specifically the partners who have experiences on IPv6 and IoT or have worked with ITU will be undertaking activities to facilitate the development and deployment of IPv6 and IoT infrastructure in accordance with regional and national needs of the beneficiary countries. The activities to be undertaken in the context of the project are the following:

	Activity Description	Responsible Party(ies)
4.1	The Centres Establishment	
	Identification of the centre site	TPRA
	Site preparations	TPRA
	Equipment and software purchase	ITU
	Equipment deployment and installation	ITU & TPRA
	Provision of curriculum	ITU & TPRA
	Coordination with other organizations & institutions	ITU & TPRA
4.2	Service Identification	
	Assessment and studies per country on IPv6 and IoT	ITU & TPRA
	The appropriate government services and location(s) will be identified	TPRA
	Definition of the scope (estimated number of required experts for the Project)	ITU & TPRA
	Common needs/requirements on IPv6 and IoT. Technologies will be identified and taken into account so as to facilitate replication within the same country and in other countries in the Arab Region	ITU & TPRA
4.3	Technology Design	ITU
	Based on the results of the Assessments and Service Identification (IPv6 based services and IoT)	
	Definition of the technology strategy	ITU
	Definition of the technology design objectives	ITU
	Identification of technology components to meet these objectives	ITU & TPRA
4.4	Implementation	
	Quality assurance and IPv6 and IoT service requirements for conformance testing	ITU & TPRA

	Any further adjustments related to the contents and interface design will also be done before the service becomes operational (IPv6 and IoT)	ITU & TPRA
4.5	Testing and Service, (IPv6 and IoT), Roll Out	
	Building of the IPv6 and IoT platforms	ITU & TPRA
	The installation, configuration and customization of the IPv6 and IoT equipment	ITU & TPRA
	IPv6 or IoT Applications and/or services	ITU & TPRA
	Testing on compliance with IPv6	ITU & TPRA
4.6	THE IPv6 & IoT Expertise CENTER	
	Organization of IPv6 and IoT policy and Strategy trainings and workshops	ITU & TPRA
	IPv6 & IoT Technical Assistance and certification	ITU & TPRA
	Organization of trainings courses and hackathons	ITU & TPRA
	Establishment of national task forces in the selected Arab countries based on specific criteria to be developed by ITU	ITU & TPRA
	Maintenance of the IPv6 and IoT Expertise Center	TPRA
	Support of the evaluation process	ITU & TPRA

5. INPUTS

5.1 ITU

CASH CONTRIBUTION	100 000 USD (Council funds for Regional Initiatives Projects)
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5.2 TPRA

CASH CONTRIBUTION	100 000 USD
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6. ROLES AND RESPONSIBILITIES

6.1 ITU

ITU will carry out the activities for which it is responsible under this Project Document including section 4 above, management, expert assistance, organization of trainings courses, hackathons and workshops, and procurement, in order to facilitate, to the best of its ability:

- IPv6 and IoT development and deployment – countries readiness assessment;
- Support in human capacity building and skills development to better facilitate IPv4-IPv6 transition, implementation of IoT platforms and solutions;
- Establishment of IPv6 Taskforces (in the countries that do not have one) to facilitate in drafting national strategies and plans on transition to IPv6 IoT based networks;
- Use of ITU IoT Training Programme (IoTTP) content.

6.2 TPRA

TPRA will make all required efforts to support the project in accordance with the Cooperation Agreement to which this Project Document is annexed.

In close collaboration with ITU, TPRA will carry out the activities specified in the Project Document above in a form and substance satisfactory to ITU. TPRA shall provide at its own cost and expense, *i.a.*, the following products, services and facilities for the implementation of the project:

- Assist the Experts in the collection of data necessary to carry out the work and facilitate the access to all relevant documents and information required for the performance of their tasks;
- Assist the center experts with respect to all necessary immigration, taxes and custom formalities, clearances, authorizations and exemptions;
- Commit the required human resources to provide administrative and logistical arrangements in order to enable the implementation of the entire project;
- Provide, at its own cost, equipped office space and access for the experts to existing Internet, fax and telephone facilities;
- Provide the necessary infrastructure to connect the participating government entities and remote locations;
- Support the installation and recurring costs for required telecommunication and Internet Infrastructure;
- Cover the costs of Internet connectivity to the user access locations (e.g. post offices), of logistical support, physical security for all locations hosting Project's ICT infrastructure as well as salaries for local staff operating installed IPv6 solutions;
- Maintenance of the IPv6 and IoT Center, creation of training materials and related documents;
- Support for the conducting training courses and the evaluation process;
- Provide national focal point(s), help facilitate meetings with targeted stakeholders, and assist in securing additional resources for project development and implementation;
- Lead coordination with the relevant parties at the national level to contribute toward the successful implementation of the project.

7. KEY RISK FACTORS

	Risk Description	Likelihood	Impact	Mitigation Action
1	ICT LITERACY: Low level of ICT awareness and ICT literacy are major risk factors in meeting the objectives of ICT projects destined for use by the general public in developing countries. These factors often translate into low usage; and hence, lower chances for sustainability.	L	M	One must envisage public ICT awareness campaigns and basic ICT training targeting the population. Community ownership is a factor that must equally be addressed. The community in the location where the services are to be provided needs to be consulted and be an integral part of the assessment, design and development phases of the Project. The public Internet access locations will have operators to facilitate the use of these services. These risks could also be reduced through carefully assessing user needs and the socio-economic and cultural environment so that the services identified are affordable, provide tangible and




				measurable benefits and respond to the real needs of the citizens in the Arab Region.
2	AFFORDABLE INTERNET ACCESS: High cost for Internet access in many developing countries is a risk factor that, if not addressed, will negatively impact the long-term sustainability of this Project. This risk applies to end-user access to the Internet and also the monthly cost for the Internet connection in the Post Offices and other public access points.	M	H	This risk factor can be reduced through the active participation of public and private sector entities (governments, regulatory agency, operators and Internet Access providers) in the beneficiary countries. Providing services that are of interest to a large population in order to create a critical mass of frequent users' necessary to reduce the recurring costs can also reduce the risk.
3	FACILITATING ENVIRONMENT: An inappropriate policy, legal or regulatory environment is also a risk factor that could hinder the successful implementation of this Project. These factors (referred to as environmental factors).			Reduced through the selection criteria for beneficiary countries and on-going activities undertaken by the center to address these issues. Environmental risk factors also need to be addressed through government commitment, ownership and its role as a vital partner and facilitator.
4	SUSTAINABLE FINANCIAL MODEL: There are also several financial risks that should be dealt with	M	M	Reduced through well-established accounting procedures, accountability, clear definition of roles, approval process and on-going monitoring and auditing.
5	AVAILABILITY OF STANDARDIZED IPV6 AND IOT CAPACITY BUILDING CONTENT: There are several content development risk associated with developing standardized content of IPv6 and IoT	M	M	Use the available TPRA content on IPv6 that have been used before by ITU as well as ITU's standardized IoT Training Programme content resources
6	In-country activities may suffer delays due to unforeseen local events and/or circumstances	M	M	This risk will be reduced by closely involving the national focal point and the ITU Project manager in the development and implementation of this Project.

8. PROJECT MANAGEMENT

ITU as the implementing agency will supervise and administer overall implementation of the project in accordance with ITU rules, regulations and procedures.

The Project will be managed by the ITU Project Manager who will oversee and manage the work of the experts, in close cooperation with TRPA-Sudan project coordinator, other relevant ITU




divisions and departments as well as partners. The ITU Project Manager will ensure maximum integration, interaction and synergies of this project with other related ITU activities as well as with other ITU on-going and planned projects, activities and initiatives and beneficiaries' focal points.

9. MONITORING AND EVALUATION

The progress of the project will be monitored through periodical reports prepared by the Project Manager. This report will provide a summary of the project progress, the challenges as well as any necessary amendments that may be required for the project implementation. The financial status and expenditures for the project will also be updated accordingly, and an evaluation report will be prepared at the end of the project to assess the success of the project in terms of meeting its stated objectives and developmental impact based on expected outcomes and pre-identified indicators.

Upon conclusion of the project, the Project Manager will prepare a final project closure report with future recommendations that will be submitted to TPRA.

10. PROPOSED BUDGET

The proposed project budget is shown in Appendix A.

11. PROPOSED WORKPLAN

The proposed project work plan is shown in Appendix B. The work plan will be detailed during the planning implementation, as required.



APPENDIX A- PROJECT BUDGET

The table below provides the overall estimated budget for this project by category of expenditures. The breakdown by category of expenditures is based on the best available information at this time and is subject to change during implementation of the project. In order to ensure the successful implementation of the project, the project manager will have the flexibility to shift funds between budget categories as necessary.

Description	Total	ITU	TPRA
Creation of IPv6 & IoT center	20,000	10,000	10,000
IPv6 & IoT Trainings	35,000	20,000	15,000
Documentation and strategies developments	30,000	15,000	15,000
Equipment and Software	45,000	25,000	20,000
Fellowships	40,000	20,000	20,000
Evaluation	10,000	5,000	5,000
Missions	10,000	5,000	5,000
Misc.	909		909
Sub-Total	190,909	100,000	90,909
AOS (10%)	9,091		9,091
Total:	200,000	100,000	100,000

APPENDIX B – PROJECT WORK PLAN The table below shows the key activities necessary for the successful implementation of this project as well as the expected timeframe for their completion.

	Activity Description	2020		2021				2022			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	The Centres Establishment		X	X	X						
	Identification of the centre/ site preparations		X	X	X	X	X				
	Equipment and software purchase			X	X	X	X				
	Equipment deployment and installation			X	X	X	X				
	Provision of curriculum		X	X	X	X	X				
2	Service Identification										
	Assessment and studies per country on IPv6 and IoT			X	X	X					
	The appropriate government services and location(s) will be identified			X	X	X					
	Definition of the scope (estimated number of required experts for the Project)			X	X	X					
	Common needs/requirements on IPv6 and IoT			X	X	X					
3	Technology Design										
	Based on the results of the Assessments and Service Identification (IPv6 based services and IoT)				X	X	X				
	Definition of the technology strategy				X	X	X				
	Definition of the technology design objectives				X	X	X				
	Identification of technology components to meet these objectives				X	X	X				
4	Implementation										
	Quality assurance and IPv6 and IoT service requirements for conformance testing				X	X	X				
	Any further adjustments related to the contents and interface design				X	X	X				
5	Testing and Service, (IPv6 and IoT), Roll Out										
	Building of the IPv6 and IoT platforms					X	X	X			
	The installation, configuration and customization of the IPv6 and IoT equipment					X	X	X			
	IPv6 or IoT Applications and/or services					X	X	X			
	Testing on compliance with IPv6					X	X	X			
6	The IPv6 & IoT Expertise CENTER										
	Organization of IPv6 and IoT policy and Strategy trainings and workshops						X	X	X		
	IPv6 & IoT Technical Assistance and certification						X	X	X		
	Organization of trainings courses and hackathons						X	X	X	X	
	Establishment of national task forces in the selected Arab countries						X	X	X	X	
	Maintenance of the IPv6 and IoT Expertise Center						X	X	X	X	
	Support of the evaluation process							X	X	X	

APPENDIX C- Least Developed Countries



United Nations
Committee for Development Policy
 Development Policy and Analysis Division
 Department of Economic and Social Affairs

List of Least Developed Countries (as of March 2018)*, **

Afghanistan (1971)	Malawi (1971)
Angola ¹ (1994)	Mali (1971)
Bangladesh (1975)	Mauritania (1986)
Benin (1971)	Mozambique (1988)
Bhutan (1971)	Myanmar (1987)
Burkina Faso (1971)	Nepal (1971)
Burundi (1971)	Niger (1971)
Cambodia (1991)	Rwanda (1971)
Central African Republic (1975)	Sao Tome and Principe (1982)
Chad (1971)	Senegal (2000)
Comoros (1977)	Sierra Leone (1982)
Democratic Republic of the Congo (1991)	Solomon Islands (1991)
Djibouti (1982)	Somalia (1971)
Eritrea (1994)	South Sudan (2012)
Ethiopia (1971)	Sudan (1971)
Gambia (1975)	Timor-Leste (2003)
Guinea (1971)	Togo (1982)
Guinea-Bissau (1981)	Tuvalu (1986)
Haiti (1971)	Uganda (1971)
Kiribati (1986)	United Republic of Tanzania (1971)
Lao People's Democratic Republic (1971)	Vanuatu ² (1985)
Lesotho (1971)	Yemen (1971)
Liberia (1990)	Zambia (1991)
Madagascar (1991)	

* The list will be updated when new decisions become available.

** Year of inclusion on the list in brackets.

¹ General Assembly resolution A/RES/70/253 adopted on 12 February 2016, decided that Angola will graduate five years after the adoption of the resolution, i.e. on 12 February 2021.

² General Assembly resolution A/RES/68/18 adopted on 4 December 2013, decided that Vanuatu will graduate four years after the adoption of the resolution on 4 December 2017. General Assembly resolution A/RES/70/78 adopted on 9 December 2015, decided to extend the preparatory period before graduation for Vanuatu by three years, until 4 December 2020, due to the unique disruption caused to the economic and social progress of Vanuatu by Cyclone Pam.

APPENDIX D - Sudan

Permanent Mission of
The Republic of the
SUDAN - Geneva



البعثة الدائمة
لجمهورية السودان
جنيف

SMG/60/16

The Permanent Mission of the Republic of the Sudan to the United Nations Office and other International Organizations in Geneva presents its compliments to the International Telecommunication Union (ITU), and has the honor to inform that Sudan Government is committed to the 1946 Convention on the privileges and immunities of the UN and is ready to apply its provisions by analogy in the context of the (ITU) Project in Sudan.

The Permanent Mission of the Republic of the Sudan to the United Nations Office and other International Organizations in Geneva avails itself of this opportunity to renew to the International Telecommunication Union (ITU) the assurances of its highest consideration.



Geneva, 29 June 2016

International Telecommunication Union (ITU)
Place des Nations
1211 Geneva 20