

TERMS OF REFERENCE

Position Title:	ICT Technical Specialist, for work on enhanced connectivity for the Higher Education Sector Somalia
Accountable to:	Project Manager (Mohamed Ware), Program Implementation Unit (PIU) in Ministry for Posts and Telecommunications (MPT), Somalia
Type of Appointment	Individual Consultant, national hire in Somalia
Reference No	GFRS/ICT/2015-16/C20
Duration	100 days (with possibility of extension)
Duty Station	Mogadishu, with trips to Nairobi, Garowe and other Federal States, as required

1.0 Context:

The ICT Sector Unit of the World Bank Group is working with the Ministry of Posts and Telecommunications (MPT) and the Ministry of Finance of the Federal Government of Somalia to provide a program of ICT Sector Support, 2014-2018. The Federal Government of Somalia is the Recipient of the ICT Sector Support in Somalia program endorsed by the Somalia Development and Reconstruction Facility (SDRF) and funded under the Somalia Multi-Partner Fund (MPF) administered by the World Bank.

Under the second phase of the program, the Program Implementation Unit (PIU) of the Ministry of Posts and Telecommunications is seeking to employ an individual consultant for the post of an “**ICT Technical Specialist**” consultant to support the design and build-out of a communications network for higher education institutions in Somalia. The contract would be for an initial period of 100 days, with a possibility of renewal.

Background

The project development objective is *“to contribute towards the process of developing a regulatory framework for the telecommunications sector and building an ICT infrastructure in Somalia”*. The second phase of the project has three components:

1. Enabling Environment, focusing on supporting the regulatory and governance framework for the sector, following the anticipated passage of the new Communications Law. This will provide for ongoing support to the Ministry and new regulator and will facilitate a new activity on support for the implementation of an effective mobile-money framework.
2. Efficiency and equity in access to connectivity, which will support:
 2. 1. The establishment of a framework for SIM card registration;
 2. 2. The establishment of communications rooms in key ministries across different economic zones, including Puntland;
 2. 3. Supporting connectivity to the higher education sector, which includes support to Somali Research and Education Network (SomaliREN), provision of advance

purchase of internet bandwidth, capacity-building, and construction of a Network Operation Center (NOC) and support for a national communications network for the higher education sector

3. Support and Capacity-Building for the Project Implementation Unit within the MoPT, and a Project Coordination Unit for local implementation in Puntland.

Sub-component 2.2, “Supporting Connectivity to the Higher Education Sector,” encompasses four sub-activities:

- (1) Bandwidth/connectivity support capacity for universities and tertiary institutions, through a demand aggregation scheme and via competitive tendering. This would be carried out in collaboration with Universities in the higher education sector, and with parallel financing from the AfricaConnect program. This high-speed bandwidth will also facilitate the interchange of education and research content between higher education universities, including, but not limited to SomaliREN member institutions. There is also scope for demand aggregation of international bandwidth requirements with component 2.3 (Communications Rooms for Ministries). Bandwidth in Mogadishu will be covered principally through the AfricaConnect program, whereas in the rest of the country a separate procurement would be carried out using the funds from the Bank program.
- (2) Construction of a Network Operations Centre (NOC) and a local distribution network (using a mix of fibre, microwave and satellite) used to manage and maintain the higher education network. This will include training and capacity building for NOC staff on the distribution of bandwidth (through a university internet exchange point), monitoring the performance of the telecommunication network, carrying out basic cybersecurity tasks, optimizing the network's performance, and facilitating billing, etc.;
- (3) Covering the costs of a counterpart investment of membership to enable Somalia to participate in the AfricaConnect21 program; and
- (4) Supporting training and capacity-building in particular to support the operation of the REN network by staff of the SomaliREN and by their local counterparts in each university served.

2.0 Overall Objective:

The role of the ICT Technical Specialist is to support the design and build-out of the communications network and Network Operations Centre (NOC) for higher education institutions in Somalia. The consultant will be hired by the Ministry of Posts and Telecommunications of the Federal Government of Somalia, as part of a two-person Technical Support Team (TST), and will work closely with a “Higher Education Network Specialist” consultant (second individual comprising the TST), who will be providing advisory governance and management of the Higher Education Network, particularly relating to the organizational restructuring of the Somali Research and Education Network (SomaliREN), in addition to technical support to Network design and build-out.

The ICT Technical Specialist consultant will also be responsible for preparing, coordinating higher education project activities, specifically those under project component 2.2, in support of connectivity to the Somali higher education sector. The consultant shall report to the the Project Implementation Unit (PIU), and will work in close cooperation with the MPT/PIU, the SomaliREN, the World Bank team, the UbuntuNet Alliance, and the other relevant stakeholders and international donors. The TST will operate as a 2-person team reporting to the PIU and will provide support in this way until the Higher Education Network is operational and equipped with staff sufficiently trained to manage the Network independently.

3.0 Tasks:

The tasks of the –“ICT Technical Specialist” tasks will include, but not be limited, to the following:

- i) Design an initial Network system design, including topographical design, for the Higher Education network, (including the Network Operating Center and corresponding fibre, microwave, or satellite links, both in Mogadishu and other areas of operation¹) with which to frame the technical requirements for the firm tender.
- ii) Supervise, with support from the Design/Management Specialist, the installation and commissioning of SomaliREN's national and regional infrastructure, including the NOC, within the project timeframe, in collaboration with inputs from the UbuntuNet Alliance's support to SomaliREN;
- iii) Facilitate the interchange of education and research content between higher education universities, including SomaliREN member and non-member institutions and other global national research and education networks.
- iv) Develop and coordinate training and capacity building programming for the NOC and other Network-related staff, including relevant university end-user personnel
- v) Liaise with regional universities and institutions to facilitate collaboration and capacity building opportunities between Somali universities and regional counterparts.
- vi) Represent and advocate for connectivity in higher education sector, communicating the progress, successes, and challenges of the project to the relevant ministries, its management and staff as well as to the MPT/PIU and the World Bank.
- vii) Develop an implementation plan for the Higher Education Network and monitor its implementation progress throughout the contract lifetime. This includes conducting site visits to provide advisory services and/or monitoring to network deployment activities.
- viii) Support to the MoPT/PIU in the procurement process for all relevant firms and consultants associated with the Network build, operate, and transfer process, including RFP, bid evaluation, negotiation and contract finalization;
- ix) Support to the SomaliREN in carrying out a readiness assessment across the Somali higher education institutions to provide a baseline for the connectivity project, and to define the eligibility criteria for connectivity to the Network.
- x) Certify completion of network installation, issue operational acceptance certificates to vendors/ suppliers/ contractors
- xi) Review, analyze, and interpret proposed and/or pending federal and state level legislation to assess its impact on the assigned program area.
- xii) Carry out other periodic project-related duties that may be assigned by the Project Manager;

4.0 Duration of the Assignment:

The offer is initially for 100 days of work over the course of six months, subject to review after the first six months, with possibility of extension dependent on performance. The duty station is Mogadishu, Somalia, but some travel to the different economic zones of Somalia and to Nairobi and other regions will be expected.

¹ Please see the PCN for Component 2.2 for more details.

5.0 Expected outcomes/Results:

- A detailed implementation design plan outlining how the Higher Education Network will be implemented, including enabling opportunities for future growth, and containing a Pilot Phase 1 and a larger Phase 2. (To be done together with the international Higher Education Network Specialist)
 - The implementation design plan should show evidence of collaboration with the other consultants and parts of the projects as well as collaboration with the UbuntuNet Alliance (AfricaConnect Initiative), SomaliREN Coordinating Board, ITU, African Development Bank, UN/AU IST Team and other development partners;
- Detailed technical specifications for the network's equipment fiber, satellite and microwave connections based on the implementation plan, and in coordination with the UbuntuNet Alliance regional-level technical assistance and support etc., and based on the leasing arrangements facilitated by both the UbuntuNet Alliance and the World Bank.
- Training and capacity building workshops and learning sessions on a continuous timeline for NOC and university staff, MoPT staff, SomaliREN Board, and other stakeholders.
- Advice to the PIU on procurement of the firm(s) engaged to build, operate, and transfer the NOC and national backbone and local loop(s) comprising the Somalia Higher Education Network, ex., assisting in preparing bidding documents.
- Certification of network installation completion and operational acceptance certificates to vendors/suppliers/contractors.
- A final report summarizing the outcomes and evaluating the readiness of the Somalia higher education network according to international standards and best practices within the region.

Note: Primary deliverables for the Independent Consultants comprising the TST are overlapping, and the Independent Consultants are expected to work as a team.

6.0 Reporting:

The Higher Education Specialist will report directly to the MPT/PIU. As part of the scope of work, the consultant will work closely with Technical Staff from implementing agencies, including but not limited to the SomaliREN, the line ministries, and other officers responsible for project activities. The PIU will then coordinate with the overall MoPT. The World Bank team will work with the consultant and the PIU through coordinated weekly calls and site visits, based on need.

7.0 Facilities to be provided by the Client:

The MoPT/PIU will provide the Consultant with office facilities, Internet connectivity, essential utilities, office services, stationery and office supplies and use of a computer, printer, scanner and photocopying etc. In addition, the ICT Project will make available to the consultant copies of all the documents that he/she may need to discharge his/her functions; and will assist the Consultant in liaising with all agencies of government and the private sector under the project and with other agencies of government on matters related to the project. The project will provide transport to the consultant for official duties.

8.0 Qualifications, Experience and knowledge:

a) Qualifications:

- An advanced degree (or equivalent) in the IT, Computer Science, or engineering disciplines
- Bachelor's degree (or equivalent) in in the IT, Computer Science, or engineering disciplines would be an asset
- An advanced degree (or equivalent) in Education Management, Public Administration, Economics, or related field.
- Bachelor's degree (or equivalent) in Education Management, Public Administration, Economics, or related field would be an asset.

b) Experience:

- At least seven (7) years of relevant experience in ICT operations and/or management fields if incumbent has a bachelor's degree in CT, IT, or related fields; or 3 years of relevant experience if the incumbent has a master's degree in the aforementioned subjects.
- At least seven (7) years of relevant experience in the education programming and management fields if incumbent has a bachelor's degree in education management, public administration, or related fields; or 3 years of relevant experience if the incumbent has a master's degree in the aforementioned subjects.
- Experience in operation and maintenance of large network, systems design and data transmission involving optical fiber is essential.
- Experience in operation and maintenance of VSAT, and microwave networks is essential.
- Knowledge of and demonstrated experience in management of contracts and procurement of network equipment is preferred.
- Experience working in the Somali higher education Sector and in the ICT Sector in Africa is essential.
- Experience working with universities or firms improving campus networking and other ICT infrastructure support would be preferred.
- Experience in a commercial environment, with negotiation skills and experience on bandwidth procurement and leasing of infrastructure is preferred.
- Experience in operation and management of a National Research and Education Network (NREN) is preferred.
- Experience in projects funded by international donors will be an asset.

c) Knowledge:

- Extensive knowledge of the education and higher education system in Somalia.
- Knowledge and appreciation of the current political context of Somalia.

d) Competencies:

i. Technical Competencies

- Analytical and problem solver
- Advanced computer knowledge
- Attention to detail.

ii. Behavioral Competencies

- Resourceful/multi-tasker
- Effective verbal and listening skills
- Great organisational skills

- Team player
- Excellent communication, interpersonal and telephone skills
- High degree of maturity and confidentiality.
- Tacit diplomacy
- Good judgement and perception
- Self-motivated and outcome-oriented personality.
- Networking skills, especially in the socio-political context of Somalia.

e) **Language Requirement:**

- Fluency in English is must.
- Fluency or Working knowledge of Arabic will be added advantage.