Section 7. Terms of Reference

For

Operation & Maintenance of LAN, Webmail, Internet, Hardware, Software and Multimedia Support Services at LGED HQ

1. Background

The Local Government Engineering Department (LGED) is one of the largest public sector organizations entrusted for planning and implementation of local level rural, urban and water sector infrastructure development projects throughout the country. To deal with such huge infrastructure development programs properly and efficiently, LGED uses Information and Communication Technology (ICT) as tools for planning and management to discharge its responsibilities. LGED started computerization at the headquarter level in the late 1980s. During early 1990s, computers were provided at district and upazila levels. GIS and MIS sections were established in 1992. Local Area Network (LAN) at the headquarter level was established in 1996 with fiber optic backbone. To keep up with advancement of technology which is moving very fast, it is now time to carry out a major upgrading of the network and server administration and data center management to embrace and utilize state-of-the-art innovations for better services.

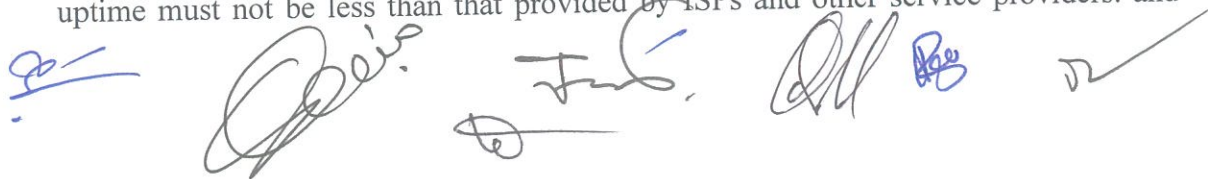### 2. Objective(s) of the Assignment

The main objective of the consultancy service under these Terms of Reference (TOR) is to provide technical support to the MIS Section of LGED for Strengthening ICT activities of LGED by upgrading, operation & maintenance of ICT related activities. Broadly the objective is summarized below:

i. *Keep the LAN and Internet system 24/7/365 hours' uptime in coordination with the ISP and other service provider;*

ii. *Maintain LGED's Mail server and Email gateway, central antivirus system, Web Gateway, firewall, Wi-Fi, IP intercom;*

iii. *Support MIS section to update and maintain the existing ICT policies of LGED;*

3. Scope of Services, Tasks (Components) and Expected Deliverables

The main purpose of these services is to provide all types of ICT support to the end users of LGED headquarter. The scope of these services shall be, but not limited to, as follows:

a. The Consultant will monitor and keep the LAN and Internet system 24/7/365 hours' uptime in coordination with the ISP and other service provider. Separate Service Level Agreements (SLA) had been signed with the ISPs and other service providers. The uptime must not be less than that provided by ISPs and other service providers. and

ensure system security and data back-up, develop and implement disaster recovery plan as required to consider the data and resources involved in the whole MIS;

b. The Consultant will maintain LGED's Mail server and Email gateway, and will create and modify necessary Inbound & Outbound policy for the mail server;

c. The Consultant will maintain the central antivirus system at LGED HQ to make the LAN system faster and keep the system spam-free and regularly monitor & update the system. Monitor Antivirus server dashboard to check user status and virus activity, and take necessary action where necessary;

d. The Consultant will configure, administer, and maintain LGED's web gateway, FTP servers, and router, and establish a robust LAN operating and monitoring system with digital data storage system within the servers to be accessed through LAN and internet by LGED personnel / authorized users with its Consultant.

e. The Consultant will manage the Active Directory, create AD user and member. Configure new user ID and password for WLAN. Monitor and manage Network Management System (NMS), Wireless LAN Controller (WLC) and bandwidth.

f. The Consultant will provide different types of network and network security solution related support, and will manage Web Gateway, firewall, central antivirus, Wi-Fi, IP intercom and will configure new IP phone and update data sheet, update IP Phone information to CUCM (Cisco Unified Communications Manager) and datasheet (IP phone user and Wi-Fi user) and publish at LGED website (IP phone user list).

g. The Consultant will manage backup of all servers', check health of the servers and update all servers' patch and firmware.

h. The Consultant will maintain server room and switch rack and ensure smooth interconnectivity at server room and all remote switches.

i. The Consultant will administer, monitor and maintain LGED's unit wise application software and digital data storage system within the servers to be accessed through LAN and internet by LGED personnel / authorized users.

j. The Consultant members deployed in the units of LGED will maintain and enhance LGED website and existing software/application of concern unit of LGED according to the need under the guidance of central app developer pool. S/he will also be responsible to collect required necessary data from headquarter and other LGED offices, entry in system and make it functional;

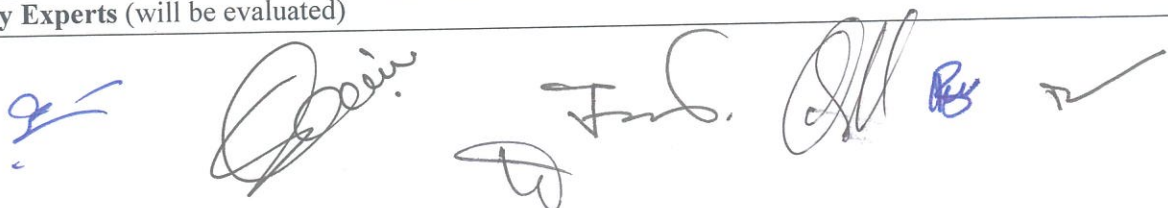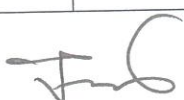k. The Consultant will use the existing e-ticketing system and keep monitoring & upgrade the system;

l. The Consultant will coordinate and provide support for the consultancy service of Data Center and Networking activities.

m. The Consultant will provide support for hardware and software installation to LGED officials, and will troubleshoot computer, printer and different IT devices hardware issue as and when required;

n. The Consultant will keep continuous interaction with different levels of LGED personnel to understand LGED's vision and requirements for network and data services;

o. The Consultant will prepare as-found documentation of network resources (like servers, core router, switch, access points, etc); suggest necessary changes and upgrade and make schedule of regular inspection and maintenance;

p. The Consultant will suggest the new policies of network system, internet and email facilities for LGED which may introduce to the organization in future;

q. The Consultant will provide support for Power-Point presentation preparation, graphics design, capturing photos and any other official support as and when required;

r. The consultant will be responsible for operating LGED SMS broadcasting service and upload tender document, No Objection Certificate (NOC)/ Government Order (GO) in the LGED web portal as well us updating the overall portal;

s. The consultant will help LGED officials to prepare technical specifications of different IT equipment as per requirement of Unit/ Project offices of LGED;

t. The Consultant will work under direct supervision and direction of Additional Chief Engineer (ICT) and Superintending Engineer (SE) (ICT) and MIS section In-charge through the designated counterpart official (Engineer at MIS section) with overall guidance of ICT Core Team at LGED HQ.

u. The consultant may have to continue their services after the completion of the contract subject to the business need, satisfactory performance of the consultant and approval from the competent authority.

4. Team Composition & Qualification Requirements for the Experts:

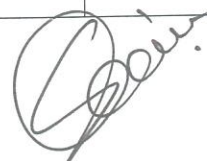| Sl.	Name of position	Qualification	Similar Experience	Man-month	Responsibilities
Key Experts (will be evaluated)					

Sl.	Name of position	Qualification	Similar Experience	Man-month	Responsibilities
1.	Team leader	Bachelor degree in Computer Science/ Computer Science & Engineering or equivalent	12 years	7	· Management and Coordination of the service . Excellent knowledge on LAN , Cyber security, Webmail, Mail Gateway and Data center component Management. . Experience to lead a IT Management Service Team in Government Organization . Maintain and suggest update to the existing ICT policies of LGED
2.	Network Administrator (1 No.)	Bachelor degree in Computer Science/ Computer Science & Engineering with specialization of Networking or equivalent	10 years	14	· Plan, design and manage for upgrading the LAN & webmail system, maintain anti-virus system and upgrading the ticketing system. . Keep the LAN & internet system 24/7 hours uptime and ensure system security · Maintenance of central anti-virus system & web gateway LAN implementation and troubleshooting
3.	Network Engineer (1 No.)	Bachelor degree in Computer Science/ Computer Science & Engineering with specialization of Networking or equivalent	5 years	14	· Plan, design and manage for upgrading the LAN & webmail system, maintain anti-virus system and upgrading the ticketing system. · Keep the LAN & internet system 24/7 hours uptime and ensure system security · Maintenance of

Sl.	Name of position	Qualification	Similar Experience	Man-month	Responsibilities
					central anti-virus system & web gateway LAN implementation and troubleshooting
4	Assistant Network Engineer (2 No.)	Bachelor degree in Computer Science/ Computer Science & Engineering with specialization of Networking or equivalent	5 years	28	· Plan, design and manage for upgrading the LAN & webmail system, maintain anti-virus system and upgrading the ticketing system. · Keep the LAN & internet system 24/7 hours uptime and ensure system security · Maintenance of central anti-virus system & web gateway LAN implementation and troubleshooting
5	Webmail Administrator (1 No)	B.Sc. in CS or CSE or EEE or equivalent. - 4 years' Experience in IP routing and Network design - 2+ year Experience of VoIP technologies and SIP related protocols and implementations - Knowledge and experience in configuration of major open source IP Telephony applications, such as CISCO IP Telephony. - Knowledge of multiple operating systems administration, including - UNIX/Linux & Microsoft Windows Servers	5 years	14	· Administers and maintains the organization's email system(s) and email security gateway. · Monitors server performance, mail routing and email security gateway. · Creates user accounts and maintains security levels on databases. · Provides first-level telephone support and troubleshoots issues. · Monitors existing messaging infrastructure and server usage, ensuring proper working order. · Provides

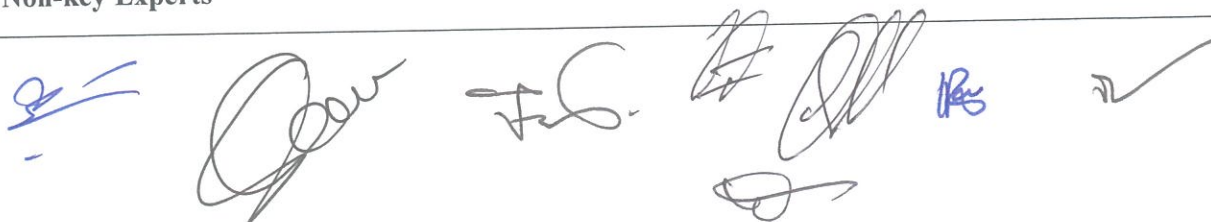| Sl.	Name of position	Qualification	Similar Experience	Man-month	Responsibilities
					recommendations and plans for improvements to e-mail network. · May document internal policies or develop training for end-users.
6	IP Phone & Voice Server Administrator (1 No)	B.Sc. in CS or CSE or EEE or equivalent. MCSE Certification. - Expert in Active Directory and the associated Microsoft product line and have a solid understanding of -- Identity Management - Excellent understanding of Directory services to troubleshoot all escalated issues	5 years	14	• Internet Telephony services implementation, integration and testing • SIP-based servers configuration and maintenance • Service design and configuration on IP-to-PSTN gateways. • Single point of contact with our VoIP partners, PSTN carriers and outsource service developers.
7	AD & WLAN Administrator (1 No)	B.Sc. in CS or CSE or EEE or equivalent. MCSE Certification. - Expert in Active Directory and the associated Microsoft product line and have a solid understanding of -- Identity Management - Excellent understanding of Directory services to troubleshoot all escalated issues	5 years	14	• Extensive knowledge in all facets of AD-related tasks and activities, as well as with Domain Controllers (from an architecture, engineering, deployment, operational and support perspective) • Central controlled WLAN implementation, integration and testing. • Control WLAN user through Active Directory authentication.

Sl.	Name of position	Qualification	Similar Experience	Man-month	Responsibilities
8.	Multimedia Professional (1 No.)	Diploma in Computer Science/ Bachelor in any subject with specialization of Hardware and software installation	5 years	14	• Provide support to install different software for computer and IT devices. • Provide support for PowerPoint Presentation, Graphics design & capturing photos.
9.	Hardware Engineer (1 No.)	Bachelor or Diploma in Computer Science/ Computer Science & Engineering / Equivalent field with specialization of Hardware and software installation	5 years	14	• Diagnose, troubleshoot, servicing, maintenance and installation of computers, printers, notebooks or other IT related equipment. • Provide support to install different software for computer and IT devices.
10.	Assistant Hardware Engineer (2 No.)	Diploma in Computer Science/ Computer Science & Engineering / Equivalent field with specialization of Hardware and software installation	5 years	28	• Assist Hardware Engineer to diagnose, troubleshoot, servicing, maintenance and installation of computers, printers, notebooks or other IT related equipment & • Provide support to install different software for computer and IT devices
Non-key Experts					

Sl.	Name of position	Qualification	Similar Experience	Man-month	Responsibilities
1.	Hardware/ Support Staff (2 no)	SSC + Certificate course/ Diploma in Hardware maintenance or troubleshooting	3 Years	28	• Support Hardware section to diagnose, troubleshoot, servicing, maintenance and installation of computers, printers, notebooks or other IT related equipment • Provide support to Hardware section in other activities.
2	Asst. Programmer/ Asst. Data Analyst (4 No.)	BSC in CS/CSE/MIS/IT/equivalent with extensive expertise in programming/ developing web based software application.	5 years	56	Maintenance and enhancement of LGED website and existing software/application of concern unit of LGED. . Customization of application to generate reports as per management requirements. . Testing the application and Training to the end user. . Take the responsibility of Data collection and Data entry required for the application. . Data sharing and integration to different application of LGED.
3	Office Assistant (1 no)	SSC	3 Years	14	Support day to day activities of MIS Section.

5. Reporting Requirements and Time Schedule for Deliverables

The consultant will submit following reports to SE (ICT) as contingent on delivery of outputs and payment with strict time line. The language of report would be in English:

a. Inception report within 15 (fifteen) days from the start of the contract which must include a time bound activity plan and methodology of the work acceptable to the LGED management.

b. Quarterly progress reports in connection with the agreed work schedule within 7 (seven) days at the end of every 3 months.

c. Final report depicting all activities done during the whole tenure at least 10 (ten) days before the end of the tenure.

6. *Client's Input and Counterpart Personnel*

The client shall provide all existing documents and data to the consultant for operation and management of LAN system as well as LGED website. The client will also provide necessary computers, hardware or software to the consultant to perform the services. Moreover, the client will provide limited required office space or furniture to the consultant. The consultant has to work in LGED office compound and the delivery shall be made in the office of the client.

The Consultant will work under the direct supervision and direction of Superintending Engineer (SE) (ICT) and MIS section In-charge through the designated counterpart official (Engineer at ICT Unit) with overall guidance of ICT Core Team at LGED HQ.

7. Payment Schedule:
Payments shall be made in line with agreed-on outputs according to the following schedule:

(i) Inception Report: Ten (10) percent of the lump-sum Contract Price shall be paid upon the submission of the Inception Report duly accepted by the Client.

(ii) Quarterly Report: Twenty (20) percent of the lump-sum Contract Price shall be paid upon the submission of the Quarterly Report after every three months (4 Quarterly Reports in total) duly accepted by the Client.

(iii) Final Report: Ten (10) percent of the lump-sum Contract Price shall be paid upon submission of the Final Report duly accepted by the Client.

8. Duration of assignment and working hour:
The total duration of the assignment is fourteen (14) months. All consultant team members need to be onsite at LGED HQ. The general working hour will be followed by the Government schedules but it is necessary to keep the LAN, Internet and all operating servers for 24/7 hours uptime as well as regular updating of LGED website. In addition, when the consultant engages with the client for meeting, discussion or presentation the consultant shall follow the normal working hours and holiday rules of the government.