REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF INFORMATION AND COMMUNICATIONS TECHNOLOGY

# TERMS OF REFERENCE
# IP TRANSPORT MUNICIPAL WITH WI-FI CMS
**(AURORA)**

## I. GENERAL INFORMATION

- **Project Sites:** Public places within Aurora Province
- **Target Beneficiaries:** The General Public of Aurora Province
- **Proponent:** Free Wi-Fi Program Luzon Cluster 2 Team
- **Project Timeframe/Service Coverage:** One (1) year IP Transport Municipal Service with Wi-Fi Access Point Service Level Agreement (SLA), technical assistance, and on-site support
- **Project Total Cost:** Php 3,510,000.00

## II. EXECUTIVE SUMMARY

The DICT's Free Public Internet Access Program shall provide free Internet access to the general public through the installation of Wi-Fi access points at publicly-owned premises including hospitals, parks, ports, schools, state colleges and universities.

Beyond the aim of bridging the Philippine digital divide, the Program also seeks to encourage knowledge growth and accelerate economic development in the region.

## III. RATIONALE

The basis of this tender for Managed Internet Service is Republic Act No. 9184, also known as the "Government Procurement Reform Act".

Section 5 (h) of Republic Act No. (R.A.) 9184 defines goods as referring to all items, supplies, materials, and general support services which may be needed in the transaction of public business or in the pursuit of any government undertaking. Such definition necessarily includes the procurement of internet service providers and public utility services, such as water, electricity, and telecommunication services.
The GPPB Guidelines on the Procurement of Water, Electricity, Telecommunications and Internet Service Providers (ISPs), as amended, states that:

"**3.3.2 New ISPs**

If the procuring entity does not presently engage an ISP or, after conduct of a cost-benefit analysis as required in the preceding subsection, is not satisfied with the performance of its existing ISP, the following procurement methods are prescribed:

3.3.2.1 If there is more than one service contractor operating within the area, public bidding or any of the applicable alternative methods of procurement.

3.3.2.2 If there is only one service contractor operating within the area, direct contracting."

Considering the above premise and upon verification of the current market prices and the quality of service for Internet connectivity along with its internal policies, the Free Wi-Fi for All - Free Public Internet Access Program of the DICT may acquire an Internet connection via the allocated budget for implementation.

## IV. OBJECTIVE

This project refers to a subscription to One (1) year IP Transport Municipal Service including Wi-Fi access point and Service Level Agreement (SLA) covering Aurora Province service points.

## V. SCOPE OF THE PROJECT

The project covers a total of 3 sites in 3 localities within Aurora Province.

## VI. PROPOSAL SUBMISSION AND EVALUATION

Bidders may submit a proposal for the offered LOT, which is as follows:

**TABLE 1: OFFERED LOT FOR IP TRANSPORT MUNICIPAL WITH WI-FI CMS (AURORA)**

| OFFERED LOT | SCOPE CRITERIA |
|---|---|
| Clustered (1 LOT) | Localities grouped into Cluster |

### EVALUATION

Evaluation of proposals shall be by OFFERED LOT.

*1.* The Bids and Awards Committee (BAC) shall open the bidding for the one (1) lot under Offered Lot.

*(Please see Annex "A": Bill of Quantities for Offered Lot. Note that this form must be completely filled out by the bidder, failure to do so may result to disqualification from bidding)*

Below is the table detailing localities covered under offered lot along with corresponding Approved Budget for the Contract (ABC).

**TABLE 2: OFFERED LOT**

| LOT | SCOPE LOCALITY | ABC PER LOT |
|---|---|---|
| 1-C | Dingalan, Aurora | Php 3.510,000.00 |
| | Dinalungan, Aurora | |
| | Dilasag, Aurora | |

## VII. PROJECT DELIVERABLES

1. **Provisioning of IP Transport Municipal Service. The SERVICE shall provide IP Transport backhaul and shall be made 98% available over 24-hour period at the municipal Point of Presence with the following specifications:**

1.1. Each SERVICE shall provide at least 21 Mbps throughput capacity for the corresponding termination point of municipal Point of Presence (mPoP). *(Refer to Annex A: Bill of Quantities for Offered Lot. Note that this form must be completely filled out by the bidder, failure to do so may result to disqualification from bidding)*

1.2. Each SERVICE shall provide at least 99% downlink and at least 25% uplink of the required throughput capacity.

1.3. Each SERVICE shall provide a Fast Ethernet or higher interface port, with an RJ-45 handover, at the mPoP termination point, and shall support IEEE 802.1ad or higher.

1.4. Each SERVICE may use either Copper/Radio/Fiber Optic facilities, or other equivalent means, to provide the required service.

1.5. Each SERVICE shall be able to accommodate, integrate and provide general IP traffic handling and management service for at least four (4) different networks by DICT.

1.6. Each SERVICE shall have an Edge Router at the municipal point of presence with the following minimum capabilities / specifications:

1.6.1 Capable of NAT

1.6.2 At least eight (8) Fast Ethernet Port

1.7. TERMINATION POINT. Each SERVICE shall virtually connect the designated municipal Point of Presence (mPoP) to the preferred termination point with the following characteristics, capacities and/or capabilities:

1.7.1. CORE

1.5.1.a. LOCATION

CORE Termination shall virtually / physically connect to DICT Core at U.P. Diliman Quezon City or MK2 Data Center at Chino Roces Ave., Makati City, as preferred by DICT.

1.5.1.b. INTERFACE

1.5.1.b.1. Each SERVICE terminated to Core shall provide an appropriate 1Gb or higher interface port with an RJ-45 handover, and shall support IEEE 802.1ad or higher.

1.5.1.b.2. Each SERVICE shall provide appropriate patch cord and transceiver necessary to integrate to DICT's equipment

1.5.1.c. ROUTING AND SWITCHING

1.5.1.c.1. Each SERVICE shall be able to provide general IP traffic handling and management service for at least four (4) different network.

1.5.1.c.2. Each SERVICE shall be capable of supporting Layer 2 (Data Link) and Layer 3 (Network) connectivity technologies

1.5.1.c.3. Each SERVICE must allow both IPv4 and native IPv6 traffic.

1.8. Must have at least one (1) Wi-Fi access point per site.

1.9. In an event that Wi-Fi access point is to be relocated due to reason such as rehabilitation, repair or renovation, the relocation shall be carried out by the service provider without any extra cost to DICT;

1.10. Relocation shall be within the Location premises.

1.11. In the event of renovation, repair, rehabilitation, stop of operation or request of host beneficiary, the DICT can nominate a replacement with the consideration of Service Provider's infrastructure coverage.

1.12. Link capacity must be available for at least 200% increase in the event that the DICT requests for an upgrade or as additional service for liquidation damage.

1.13. The provision of uninterruptible power supply shall be made available at all locations with User Capacity greater or equal to ten (10), and shall provide 220 VAC electric power with a power capacity of 100 Watts, and an additional 100 W per 100 concurrent users, sustainable for one (1) hour.

1.14. Routing equipment and other equipment relating the provision of service (including UPS and except for AP) must be secured in an equipment box/commbox with atleast 4U if EIA-310 (19") rack space, or the equivalent thereof.

1.15. The provision of power must be directly terminated/spliced to the AC source, and shall provide up to 100 Watts of 220 VAC utility electricity.

1.16. Provide weekly status report from start to end of implementation after receipt of Notice to Proceed (NTP).

**2. Provisioning of Wi-Fi access points capable of serving at least 250 concurrent users at any given time with 98% uptime and availability.**

2.1 The Wi-Fi Hotspot device:

2.1.1. Must be outdoor type;
2.1.2. Must be capable of handling high-density clients;
2.1.3. Must be capable of MESH functionality;
2.1.4 Must provide provision for blacklisting and/or whitelisting;
2.1.5. Must be capable of at least 150 Mbps speed up to 1300Mbps;
2.1.6. Must have omnidirectional or sectoral coverage;
2.1.7. Must have simultaneous dual radio capability of both 2.4Ghz and 5Ghz with MIMO technology;
2.1.8. Must have the capability of customizing coverage for:
2.1.8.1. Spot-beam coverage
2.1.8.2. Wide-beam coverage
2.1.8.3. Must be capable of carrier aggregation (at least 3X3 MIMO system)
2.1.8.4. Must support 802.11a,b,g,n,ac standards
2.1.8.5. Must be POE capable
2.1.8.6. Must be weather resistant
2.1.8.7 Must be capable of Simple Network Management Protocol version 2c (SNMP v2c)
2.1.8.8 Must be able to automatically de-authenticate idle users for at least 30 minutes of inactivity.
2.1.9 Must provide AP Isolation;

2.2. Access point must be situated in open-area section of the delivery location and must have minimal overlapping signal coverage with existing DICT Free Wi-Fi access point/s in the area.
2.3. Must have single uniform SSID of “freewifi4all”; or can be changed by DICT through formal letter;
2.4. Must be capable of captive portal functionality and redirection to specific site/s, network, or VPN network.
2.4.1. Shall be capable of integrating to DICT’s Core Services such as but not limited to AAA and Captive Portal
2.5. Must have valid and current ISO 9001 Quality Management System Certificate issued to the manufacturer by an Independent Certifying Body.

**3. Provisioning of Centralized Management System accessible via web and a dedicated dashboard for DICT access with 98% availability.**

Must be an enterprise-grade Wi-Fi management system with the following functionalities:

a. Must be able to provision Wi-Fi hotspots
b. Must be accessible through the internet via Web browser, Android, or iOS devices
c. Must provide DICT with a Multi Router Traffic Grapher (MRTG) tool capable of monitoring traffic load and link availability.

d. Must be Capable of SNMPv2 or higher capable of polling pertinent information such as but not limited to:
    1. Traffic Utilization (Uplink and Downlink)
    2. CPE Information (MAC Address, Transmitted and Received Throughput)
    3. Data retention of at least six (6) months.
e. Must provide DICT with administrative and view access
f. Must include a dashboard for quick status checking and easier visualization of performance and utilization
g. Must be scalable up to thousands of devices
h. Must have the capability to map out installed devices for efficient management and monitoring
i. Must have functionality for RF Mapping and RF spectral analysis for ideal placement of equipment, leading to optimization of performance
j. Must have built-in report creation and analytics that can be configured and downloaded to produce detailed reports
k. Must be capable of multi-site management

Reports based on data gathered from the management system will be submitted to the DICT every first week of the succeeding month following activation of site services. *(Refer to Annex "B": Service Report Template).* Corresponding Statements of Account (SOA), meanwhile, must be submitted during the first week of the following quarter.

**4. Provisioning of Support Services**

a. The service provider must have dedicated personnel monitoring the uptime of link and Wi-Fi access points.
b. The service provider must submit monthly utilization, uptime, and availability reports to DICT.
c. The service provider must submit a detailed action plan on optimization activities to be implemented monthly
d. The service provider must assign one Technical Account Manager to facilitate issue resolution
e. The service provider must address every incident encountered promptly and accordingly per the following SLA:

**1. First Level:**

1.1. The service provider must initiate remote support to be provided within the first 30 minutes up to one (1) hour from when the issue was first reported.

1.2. The service provider must provide on-site support if the issue has not been resolved within the first four (4) hour period following discovery.

2. **Second Level:**

2.1. The service provider must provide needed repair services and parts replacement services within the first four (4) to eight (8) hours when the issue has been raised;

2.2 The service provider must provide configuration/re-configuration services when needed.

f. The Service provider must submit an Incident Management Report not more than thirty (30) minutes on the onset of the issue and not more than thirty (30) minutes after the issue has been resolved.

**5. Service Level Agreement**

The provider should guarantee the availability of the Wi-Fi Internet service.

5.1. Connectivity:

The service level agreement for Internet connectivity and Wi-Fi services at all identified sites by the DICT must be maintained at not less than 98% of CIR internet and 98% uptime at all times.

5.2. Monitoring:

5.2.1. Must include 24/7 support with proactive monitoring;
5.2.2. Must ensure 98% uptime of services.
5.2.3. Must ensure 98% of the required link capacity.

The DICT is entitled to a rebate on service credits if downtime has been experienced.

In the event of downtime, providers should issue Service Credits depending on the duration of downtime in minutes. *(Refer to Annex C: Sample Computation of Rebates and Service Credit Equivalence)*

Service credits can be in the form of either a) additional bandwidth or b) additional access point service within the awarded area/s.

**6. Service Level Agreement Exclusion**

The following shall not be counted as instances of downtime subject to service credits:

6.1. Unavailability of services during scheduled maintenance windows, emergency maintenance, or other instances of downtime previously allowed by the DICT provided that DICT is informed prior of the activity;

6.2. Downtime caused by failures of components, third-party systems, or services that are not supplied or part of the service provider's coverage;

6.3 Downtime resulting from modifications to or changes of the operating system, database, application code, or other code not covered by the service provider;

6.4 Any availability or outage impact on the DICT's end (e.g. security breaches or compromised service credentials);

6.5 Downtime associated with improper use of services (e.g. credentials, call sequence, and method formats);

6.6. Any downtime resulting from acts or omissions of the DICT, its end users, any person acting on the Department's behalf, or any other third party not under the direct control or responsibility of the service provider;

6.7. Suspension or termination of services by the DICT;

6.8. Any service outage due to force majeure. "Force Majeure" shall mean any event or circumstances beyond reasonable control of the service provider which renders the performance of said provider's obligations illegal or impracticable, including but not limited to acts of God, acts of any government body or public enemy, war, civil commotion, strikes, riots, embargoes, or other concerted acts of workers, fire, explosion, sabotage, or any other causes, circumstances, or contingencies, whether of a similar or dissimilar nature to the foregoing, without fault or negligence and beyond such service provider's control, which prevent or hinder the performance by said provider of any of its obligations hereunder.

### 7. Penalty

7.1 Failure to restore down sites for seven (7) calendar days will be charged 150% of original rebate amount.

7.2 Failure to restore down sites for 30 days will be charged 200% of original rebate amount.

## VIII. ASSUMPTIONS OF THE PROJECT

1. The service provider shall supply DICT of all SLA necessary for software, hardware, and service support subscriptions.
2. The service provider shall provide software upgrades, firmware updates, and technical support for all active network components within the corresponding service period.
3. The service provider shall plan, deploy, and configure all necessary equipment, cables, and other components to successfully maintain, monitor, and manage the entire local Wi-Fi Network.

4. The service providers must have new equipment on standby to replace immediately the existing equipment once found defective.
5. The service provider must submit power consumption computation, installation design, and network diagram per location at least three (3) days after the survey.
6. The service provider must submit an as-built plan signed by Professional Electronics Engineer (PECE) as attachment to the Acceptance of Service Form *(Refer to Annex D: Acceptance of Service Template)* during acceptance activity.

## IX. PAYMENT SCHEDULE

Billing shall commence seven (7) days after services at all sites under the awarded contract LOT has been successfully accepted provided that all sites are up and working. If one site is down, re-acceptance will be conducted within three (3) working days.

The service provider shall furnish a service report receipt, to be verified by the DICT, certifying that the service is already available. *(Refer to Annex D: Acceptance of Service Template)*

Payment shall be made on a quarterly basis upon complete submission of billing statement with other supporting documents.

## X. PROJECT TIME FRAME

The delivery of the service must be completed within sixty (60) calendar days upon receipt of the Notice to Proceed (NTP)

Service coverage, meanwhile, shall include SLA and warranty for a period of one (1) year.

## XI. PROJECT SOURCE OF FUNDS

The project will be funded by the Department of Information and Communications Technology chargeable against the DICT's Special Account in the General Fund.

## XII. PROJECT ORGANIZATION

**Project Ownership:** Department of Information and Communications Technology
**Project Champion:** Secretary Gregorio B. Honasan II
**Project Director:** Undersecretary Emmanuel Rey R. Caintic
**Project Manager:** Reynaldo T. Sy
**Project Team**

a. Program Management Team: Free Wi-Fi Program Luzon Cluster 2 Team
b. Technical Team: Free Wi-Fi Program Luzon Cluster 2 Team

**Project Audit:** Internal Audit Service

## SUMMARY OF ANNEXES

**ANNEX A:** Bill of Quantities for Offered Lot
**ANNEX B**: Service Report Template
**ANNEX C:** Sample Computation of Rebates and Service Credit Equivalence
**ANNEX D:** Acceptance of Service Template

**Prepared by:**

Digitally signed by De Jesus Ravenal Alejandro
Date: 2020.08.10 13:45:04 +0800

**RAVENAL A. DE JESUS**
OIC, Provincial Head

**Certifying Availability of Funds:**

Digitally signed by Calupitan Nimir Roldan
Date: 2020.08.12 16:16:48 +08'00'

**NIMIR R. CALUPITAN**
OIC, Admin and Finance Division

**Approved by:**

Digitally signed by Sy Reynaldo Tan
Date: 2020.08.13 16:50:20 +08'00'

**REYNALDO T. SY**
Regional Director