

TERMS OF REFERENCE (TOR)

SUPPLY, DELIVERY, INSTALLATION, TESTING, CALIBRATION, COMMISSIONING, AND MAINTENANCE OF THE ICT EQUIPMENT IN THE QUEZON CITY AIR QUALITY MONITORING CONTROL CENTER

I. RATIONALE AND BRIEF BACKGROUND

Section 36 of Republic Act No. 8749 also known as the Philippine Clean Air Act of 1999 states that: "Local Government Units (LGUs) shall share the responsibility in the management and maintenance of air quality within their territorial jurisdiction."

To gather ancillary information that can help in monitoring and checking of the City's air quality, the project intends to establish the Quezon City Air Quality Monitoring Control Center for a centralized and real time observation of activities and situation within the vicinity of the air quality stations.

II. PROJECT DESCRIPTION, OBJECTIVE AND AREA OF COVERAGE

The Quezon City Local Government through the Climate Change and Environmental Sustainability Department (CCESD) intends to engage the services of a qualified Service Provider duly authorized and with the appropriate expertise, experience, and capacity to supply, deliver, install, calibrate, commission and maintain the Quezon City Air Quality Monitoring Control Center in the CCESD Office wherein air quality and weather station dashboard, other media and information sources, and video feeds from selected cameras under the Unified CCTV Command Center of the Quezon City Government (Project Aurora) will be integrated into the system to monitor real-time situation within the vicinity of the air quality stations to determine factors that affect increase in air pollution levels for the development of necessary interventions.

III. PROJECT SCOPE OF WORK

The minimum activities to be carried out in this Project are as follows:

1. Collaborate with the Quezon City CCESD regarding the siting requirements
2. Supply, delivery, installation, configuration, testing, commissioning, and maintenance of the ICT equipment for the Air Quality Monitoring Control Center (Control Center) as outlined in Annex A.
3. Integration of air quality and weather station dashboard display, other media and information sources, and video feeds from the selected cameras under the Unified CCTV Command Center of the Quezon City Government (Project Aurora) into the control center system.
4. Conduct at least two (2) comprehensive training programs (4-8 hours per session), with provision for additional training as requested, for the end-user (15 personnel) to equip them with the skills and capacity needed to undertake the daily operation and monitoring of the Control Center, etc.
5. Submit in duplicate copies all operation, maintenance and troubleshooting manuals, and training documents for the Control Center to the end-user. An Inventory of peripherals and equipment of the Control Center for maintenance purposes should also be submitted in duplicate copies.
6. Provide technical support (i.e. periodic system maintenance and operation, troubleshooting, etc.) for the Control Center including free software and hardware system upgrades for one (1) year.
7. Submit reports of the conducted maintenance check, and corrective measures implemented, among others.

8. Standby and emergency personnel to immediately conduct service maintenance or troubleshoot the system to mitigate loss operation time; and
9. Minimum of one (1) year warranty period which shall cover removal, replacement, or repair of the Control Center components.

IV. EXPECTED OUTPUT

Given the above-mentioned Scope of Work, the Service Provider under this Project is expected to submit the following:

1. Project Acceptance Document: Complete functional control center, system, and accompanying documentation
2. Maintenance and Warranty Certificate
3. Training Certificates

V. PROJECT STANDARDS & REQUIREMENTS

Minimum Qualifications and Requirements

Track Record

1. The Service Provider should have supplied and installed at least one control center in the last three (3) years and have operated and maintained similar processing systems in the country.
2. The Service Provider must submit a valid certificate of authority to sell or distribute the products/components of the Control Center as part of the Technical Requirements.
3. The Service Provider should have a single largest similar completed contract within the last three (3) years which must be at least fifty percent (50%) of the Approved Budget for the Contract.

The Service Provider must execute a statement of all its ongoing and completed government and private projects, including client feedback relative to this project as part of the Technical Requirements.

Organization

Sufficient qualified personnel must be provided to ensure the proper implementation of the scope of work. The following are the minimum personnel required:

Key Expert	Quantity	Personnel Minimum Qualifications
Project Manager	1	Must be a Filipino with a degree in Information Technology/ Electronics and Communication Engineering/ Electrical Engineering/ Computer Engineering or any related course. With at least three (3) years of experience in the fields of electronics/electrical engineering or advanced monitoring technology and communication system/ software development/ database management/control center, and other related fields.
Technical Personnel	4	Must be a Filipino with at least two (2) years of experience in the fields of electronics/electrical engineering/ advanced monitoring technology and communication system/ software development/ database management/ control center, command center, data center set-up and operations, and other related credentials

The Service Provider must have an office in Metro Manila, or an affiliate office or company that can facilitate coordination for the delivery and installation of the equipment and can provide direct technical assistance or stand-by equipment/systems in case of malfunction.

The Service Provider shall submit the complete list of Key Personnel and Support Staff with their corresponding qualifications accompanied/supported with the following documentary requirements as part of the Technical Requirements:

- Original copy of Resume or Bio-data
- Photocopy of Diploma
- Photocopy of Professional License (if applicable)

Detailed Work Plan

A Detailed Work Plan shall be submitted by the Service Provider as part of the Technical Requirements. It should contain significant information, necessary resources, timelines, activities, and strategies to be undertaken in accomplishing the Project objectives and scope of work.

Air Quality Monitoring Control Center

The Service Provider shall provide the components for the system as provided in the project scope of work of the Terms of Reference.

VI. PROJECT IMPLEMENTATION AND DURATION

The delivery of the scope of work and expected output as stated in this TOR shall be for a period of One Hundred Fifty (150) calendar days upon issuance of the Notice to Proceed (NTP) to the Service Provider.

The timeline for the implementation of the Scope of Work and Expected Output are as follows:

Scope of Work	Expected Output	Delivery Schedule
Supply, deliver, install, configure, test, and commission the Quezon City Air Quality Monitoring Control Center	<ul style="list-style-type: none">Project Acceptance Document: Complete functional control center, system, and accompanying documentation deliveredMaintenance and Warranty Certificate	Within One Hundred Fifty (150) calendar days from the issuance of the Notice to Proceed (NTP)
Integration of air quality and weather station dashboard display, other media and information sources, and video feeds from the selected cameras under the Unified CCTV Command Center of the Quezon City Government (Project Aurora) into the control center system.		
Conduct of Capacity Building Activities	Training Certificates	

VII. APPROVED BUDGET FOR THE CONTRACT AND BASIS OF PAYMENT

The Approved Budget for the Contract is **Two Million One Hundred Fifty Thousand Pesos and 00/100 Only (Php 2,150,000.00)** inclusive of all government taxes/fees. Payment shall be made upon submission and completion of the Expected Outputs as stated in the TOR.


VIII. CANCELLATION OR TERMINATION OF CONTRACT

The City may, without prejudice to other remedies against the Service Provider, unilaterally cancel or terminate the Contract, in whole or in part, due to default, insolvency or for justifiable cause or on any ground which it deems inimical to the City's or public's interest, which includes but is not limited to the following:

1. Failure of the Service Provider to provide/meet the necessary requirements as stated in this TOR and in other bidding/contract documents;
2. Violation or non-performance of the other terms and conditions of the Contract; and
3. Other acts inimical to public interest.

The guidelines contained in RA 12009 and its revised IRR shall be followed in the termination of any contract. In the event the City terminated the Contract due to default insolvency, or for cause, it may enter into negotiated procurement pursuant to Section 35 of RA 12009 and its IRR.


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<p>1. 1 SET OF VIDEOWALL DISPLAY MATRIX CONTROLLER 64ch one screen: 1 HDMI input and 2 HDMI outputs per module with LAN port HDMI Output one screen: 64ch @ D1, 32ch @ 720p, 16ch @ 1080P, 4ch @ 4K Minimum 3 HDMI Inputs, 6 HDMI Outputs in one bay Supports H.265, H.264, MPEG4 decoding</p> <p>2. 6 SETS OF 46" MONITOR WITH CABINET & FLOOR STAND Support up to 3840 x 2160 resolution High contrast ratio 4,000:1 178 degree horizontal and vertical viewing angle 3.5 mm Bezel with Stitching Machine 3840x2160 HDMI, DVI, VGA and BNC Inputs 24/7 operation At least 50,000 hours lifespan Fanless design Response Time (5ms) With cabinet stand</p> <p>3. 2 SETS OF REMOTE DATA PROCESSING AND MONITORING STATION CPU Intel Core i7 or its equivalent benchmark processor RAM 16GB 256GB SSD and 1TB HDD GPU at least 8GB Windows 11 Pro Operating System USB Keyboard and Mouse (same brand of the unit) 23.6" screen size monitor (same brand of the unit) Supports up to 1920 x 1080 resolution 16:9 display High contrast ratio 1000 :1 Fast response time 5ms HDMI input connection Includes monitoring software for viewing existing assigned cameras Can live view cameras in device list and device group Can change from main stream to sub stream and vice versa during camera live viewing Can remotely modify video settings on each remote device with proper user authorization. Can perform digital zoom & control on live view cameras Able to do local recording and take snapshot of live stream videos Able to configure device groups and tours for cameras in the device lists Can playback and download recorded videos Can share configured device groups to other user accounts Can select live view display in 1x, 4x, 5+1, 7+1, 9x, 25x, 36x, 64x Can configure multiple live view display windows</p> <p>4. COMMUNICATION CABINET AND ACCESSORIES INCLUDING NETWORK SWITCH 42U Floor Standing Data Cabinet Vented front and rear doors Removable side panels with lock Cable entry plates at the top and bottom covers Welded steel frame Static loading: 800kg Material: SPCC quality cold rolled steel Surface finish: Degreasing, Pickling, Phosphating, Powder Coated Comply with ANS/EIA RS-310-D, IEC297-2.DIN41491 PART1, DIN49491</p>	1 lot	
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<p>PART7, ETSI Standard Managed 28port Gigabit Switch 24* 10/100/1000Base-T RJ45 ports 4* 100/1000Base-X Uplink SFP slot ports Supports L2+ switching features Switching capacity: 192Gbps Forwarding rate: 41.7Mpps MAC: 8K Buffer memory: 4.1M Jumbo Frame 10K</p> <p>5. 2 SETS OF 3KVA ON-LINE UPS Capacity: 2100 Watts INPUT Voltage / Load:208V, 220V, 230V, 240V Protection: Surge Protection, Overload Protection, Short Circuit Protection On-line double conversion technology Battery Type : Sealed, maintenance-free batteries Monitoring Connectivity: USB, RS232, and SNMP port provide cable and online connection from your monitoring system. Easy Battery Expansion: External battery expansion can further extend battery support duration for extensive demand. Backup time shall be at least minimum 30mins at full load</p> <p>6. INCLUSIVE OF PROJECT INSTALLATION AND MANANGEMENT Installation of Videowall Equipment Configuration, Testing and Commissioning End-User System Training Project Management Technical and Customer Service Support for 12 Months</p>		
	TOTAL	