

DEPARTMENT OF HEALTH  
NATIONAL CENTER FOR MENTAL HEALTH  
Nueve de Pebrero St., Mandaluyong City

**TERMS OF REFERENCE**

**I. Project Title**

Deploying, commissioning and testing of network active components on New Wellness Building

**II. Background and Rationale**

The NCMH Special concerns section is involved in the creation and implementation of important mental health programs in line with the mental health law. Aside from the 24/7 crisis hotline, various programs such as the MHPSS, Crisis Hotline capacitation and training, Suicide Education and Intervention, as well as various wellness-related activities are in full swing as we cater to multiple requests on a nationwide-scale. Considering the importance of information and the speed of communication, a stable and reliable internet service connection is essential in the success of these programs. Mental health webinars, lectures and caravans are already in the works but the consistent problem of poor internet connectivity has strongly limited our services through the years. Hence, the need to address such a problem has shown to be of paramount importance, which led to this project.

**III. General Objective**

To fulfill the needed additional network components and repair of the existing backbone connection to continue service and optimize the operations of NCMH Crisis Hotline and Center for Wellness within the prescribed schedule with very satisfactory assessment and evaluation of End-user and NCMH-IHOMP/IT.

**IV. Scope of Work**

1. Design, deliver, supply, install, integrate, and configure the necessary and applicable additional server components to the existing NCMH server
2. Ensure and guarantee that the procured and delivered additional server components are compatible and appropriate to the existing NCMH system/ operation
3. Mount, install, and boot the necessary service packs, patches, service packs, and hotfixes to the existing hypervisor or operating system
4. During the installation of additional server components, fixes of physical hosts, and migration of virtual machines, the service provider must ensure that it will only have no or minimum business disruption and downtime. The service provider must consult the system administrator for their preferred schedule before doing any major installation and/or fixes.
5. Any improvement and/or supplemental to the conceptual design, quantity, and/or deemed necessary to attain functionality, integrity, security, and completion of the project must be shouldered by the service provider with no additional cost.

**V. Deliverables/ Output**

Deploying, commissioning, and testing of network active components on New Wellness Building with provision of the following ICT equipment:

1. **2 Network Switches (24-port-switch)**
  - a. **Hardware Specification**
    - 24x10/100/1000 POE+ Ethernet ports
    - 10/100/1000 4 SFP-based network module
    - Redundant uplinks
    - Support POE with a budget of 195, 30W per port

- b. **Performance and Scalability**
  - 4gb of Flash Memory
  - 4gb of DRAM
  - Throughput of at least 95 Mpps
  - Forwarding performance (64-byte packet size) of at least 128 Gbps
  - Supports up to 1023 active VLANs
  - Supports up to 4096 VLAN
- c. **Feature Specification**
  - With Cryptographically signed images to provide assurance that the firmware, BIOS, and other software are authentic and unmodified
  - With automatic configuration of QoS that allows the switch to manage QoS policies based on traffic types resulting in zero-touch
  - Traffic engineering
  - Proposed switch must support hibernation mode that puts the switch in ultra-low power mode during periods of non-operation
  - With capability to be fully integrated into the existing network switches installed in the hospital.
- d. **Must Supports fundamental switch features and must have the following standards:**
  - IEEE 802.1D Spanning Tree Protocol
  - IEEE 802.1P CoS Prioritization
  - IEEE 802.1Q VLAN
  - IEEE 802.1S
  - IEEE 802.1W
  - IEEE 802.1X
  - IEEE 802.1AB (LLDP)
  - IEEE 802.3ad
- e. **Maintenance Support 8x5xNBD (Next Business Day)**
- f. **Supports modern operating systems for the enterprise with support for model-driven programmability features**
- g. **Cabling**
  - CAT6E
  - consists of 2 runs per Information Outlet
- h. **Two 4ft by 4ft data cabinet.**

## 2. **Fiber Optic Backbone Splicing**

- a. Source Location: Server Room
- b. Destination Location: NCMH Crisis Hotline
- c. Type of Fiber: 6-core OM3 multimode fiber
- d. Pigtail must be included

## 3. **7 IP Phones (End-users/ Entry Level Phones)**

- a. At least one programmable line key.
- b. With a lit and colored display.
- c. With indicators for the audio path keys, select keys, line keys, and message waiting.
- d. Volume control toggle to adjust the volume of the handset, speakerphone, and ringer.
- e. Full-duplex speakerphone.

- f. Support H.323 and SIP for signalling protocol.
- g. Audio codec must support G.711a, G.711u, G.722, G.729a,
- h. two ports 10/100/1000 BASE-T Ethernet connection
- i. supports telephony features such as display of caller ID, auto-answer, call forwarding, call pickup, call waiting, call transfer, call back, call history, call park, call timer, conference call, music on hold, redial, message-waiting indicator, direct transfer, hold/resume, mute, time and date display, speed dial and shared line
- j. include all licenses needed
- k. Functions and Features:
  - Call Forwarding
  - Last Number Redial
  - Call Waiting
  - Call Pick-Up
  - Call-back features
  - Call on hold
  - Caller number displayed on the screen
  - Do Not Disturb
  - Multiple ringtones
  - Voice and video conferencing
  - Automatic Call Distribution
  - Dial by Name, Unified Directory Access
  - Unified Call Detail records
  - Caller ID feature
  - Transfer
  - Point-to-point video calling
  - Desktop sharing via softphone
  - Capable of handling up to 800 users
  - Personalized Automated Attendant
  - Welcome Greetings
  - Call History
  - Voicemail
  - Directory
  - Audio Conference
  - Hold
  - Paging Integration
  - Perpetual licenses if applicable
  - Centralized licensing application
  - Each IP Phone must provide high-quality speakerphone technology including an easy-to-use speaker on / off, and microphone mute.
  - Must have volume control.
  - Can support Dual power: PoE with Standard power adaptor

#### 4. 3 Entry-Level Wireless Access Points

- a. Radio Specifications
  - supports simultaneous device connections; Radio 2X2:2 in both 2.4GHz and 5GHz

2.4 GHz & 5 GHz dual-band WIDS/WIPS, spectrum analysis, & location analytics radio.

- 2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support.
- Supports Multi-user, multiple-input, multiple-output technology (MU-MIMO) and utilizes Downlink Orthogonal Frequency Division Multiple Access (DL-OFDMA) multiplexing technique.
- Supports 1024-QAM multiplexing
- Supports maximal ratio combining (MRC) & beam forming
- Data rate up to 286 Mbps on 2.4GHz and 1.2 Gbps on 5GHz
- Supports 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac, 802.11ax standards
- Has antenna gain of less than or equal to 4.5dbi when using 2.4Ghz and less than or equal to 5dbi when using 5Ghz.
- Supports roaming and mobility; PMK, OKC, & 802.11r for fast Layer 2 roaming; Distributed or centralized layer 3 roaming.
- Supports Bluetooth Low Energy.
- Supports mesh self-healing

**b. Radio Management**

- Seamlessly integrated with the existing cloud-based wireless controller of NCMH.
- Can change an AP's channel automatically within either the 2.4 or 5 GHz bands/channels when interference or contention conditions require.
- Can scan other channels to be able to detect congested and free ones. Also, to efficiently detect rogue WAPs.
- Can redistribute clients on different bands dynamically to balance associated clients so that APs can provide better Wi-Fi service to clients with weaker signals.
- Can spread associated clients within adjacent WAPs.
- Can divide Wi-Fi signals into many time slots and make each client take turns sending and receiving data from the network to improve efficiency. Also, it must have the ability to prioritize certain connections.
- Supports L2-L4 ACLs.
- With diagnostic tools for spectrum analysis and network traffic.
- Analytics:
  - a. Embedded location analytics reporting and device tracking
  - b. Global L7 traffic analytics reporting per network, per device, & per application

**c. Networking**

- 1x 10/100/1000 BASE-T Ethernet (RJ45)
- Supports 802.3af (PoE): 37-57 V
- Supports rate limiting

**d. Security**

- Supports WPA, WPA2, WPA3 - Personal and enterprise
- Supports AES and SAE encryption.
- Can be integrated and supports L2 to L7 stateful firewall from cloud-based wireless controller
- Flexible guest access with device isolation

- Enterprise Mobility Management (EMM) & Mobile Device Management (MDM) integration
  - Supports EAP-TLS, EAP-TTLS, EAP-MSCHAPV2, EAP-SIM
  - Supports VLAN tagging/pooling and tunneling with IPsec VPN
  - Real-time WIDS/WIPS with alerting and automatic rogue WAP containment.
- e. **Wi-Fi Alliance Certifications**
  - Wi-Fi CERTIFIED 6™
  - Wi-Fi CERTIFIED™ a, b, g, n, ac
  - WPA™ - Enterprise, Personal
  - WPA2™ - Enterprise, Personal
  - WPA3™ - Enterprise, Personal
- f. Perpetual license is preferred if applicable but if not, it must include a 5-year license; With a 1-year warranty and advanced replacement included.
- g. Operational even if the cloud management license is no longer active.

## VI. Project Site

Center for Wellness, National Center for Mental Health, Nueve de Pebrero St., Brgy. Mauway, Mandaluyong City

## VII. Implementation Arrangement

1. **Contact Person:** NCMH representative(s) name, address and contact no. of Project Manager and staff concerned:

**Project Manager:** Rodney R. Boncajes, MD, FPPA  
 Chief, Office of the Special Concerns  
 National Center for Mental Health  
 Tel. (02) 8531-9001 loc 1810

**Project Coordinator:** Bernard B. Argamosa, MD, DSBPP, MMHoA, FPPA  
 Medical Specialist III  
 Program Director, NCMH Crisis Hotline  
 Tel. (02) 5319001 loc. 428 and 1810

**Administrative Staff:** Anthony Z. Baltazar  
 Administrative Assistant II  
 NCMH Special Concerns Office, National Center for Mental Health  
 Tel. (02) 5319001 loc. 428 and 1813

2. **Contract Administration:** The contract of the Service Provider shall be handled by the National Center for Mental Health
3. **Obligations of the NCMH**
  - a. Provide sufficient, properly qualified operating and technical personnel, as required by the Service Provider to properly carry out the project at or before the time specified in the Terms of Reference (TOR), and/or Updated Project Plan.
  - b. Review and approve recommendations and deliverables of the service provider, and provide support to the delivery.
  - c. Review and resolve issues, concerns and/or problems arising from the provision of project.
  - d. Be responsible for the timely provision of all resources, access, information, and decision-making under its control which are necessary for the project and as identified in the Agreed Inception Report and/or Updated Project Plan, except where provision of such items is explicitly identified in the Contract as being the responsibility of the Service Provider.

Delay by the concerned partner stakeholders may result in an appropriate extension of the time for operational acceptance or accomplishment/ conclusion of the project as agreed by both parties.

- e. Assist in coordinating with and issuing instructions as may be necessary and appropriate to other government agencies for the prompt and effective implementation of the services.
- f. Grant authorized representatives access to premises as well as equipment and all facilities located therein to perform the service provider's obligation
- g. Ensure the accuracy of all information and/or data to be supplied to the Service Provider, except when otherwise expressly stated in the Contract.
- h. Validate with the concerned partners the content and quality of the submitted deliverables and performed services of the Service Provider.
- i. Assume primary responsibility for the acceptance of deliverables or outputs.
- j. Make prompt reviews and revision of the work produced if necessary

#### 4. Obligation of Service Provider

- a. Perform the services and carry out the obligations with all assiduousness, efficiency, and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe methods.
- b. Conduct all activities with due care and diligence, in accordance with the Contract and Terms of Reference, and with the skill and care expected of a competent provider of the services required.
- c. Timely provision of all resources, information, and decision making under its control that are necessary to reach a mutually agreed Updated Project Plan within the time schedule specified in the Terms of Reference. Failure to provide such resources, information, and decision making may constitute grounds for termination.
- d. Complete delivery, installation, configuration, deployment and commissioning within the prescribe schedule from the receipt of the notice to proceed
- e. Secure the NCMH Permits, licenses and approvals that are or may be necessary to perform services
- f. Submit to the End User the final materials, reports and documents specified in the contract, terms of reference, and agreed upon during negotiation.
- g. Closely coordinate with the NCMH-IHOMP/ IT for technical and administrative issues and concerns to ensure success.
- h. Provide a chief officer or program manager who will be directly in charge of managing the project and day-to-day contact personnel in charge of operations.
- i. Submit a proposed working schedule for approval of NCMH and secure security pass and working permit on their site.
- j. Comply with all laws in force in the Philippines. The laws will include all national, provincial, municipal, or other laws that affect the performance of the Contract and are binding upon the Service Provider. The Service Provider shall indemnify and hold harmless the NCMH from and against any and all liabilities, damages, claims, fines, penalties, and expenses of whatever nature arising or resulting from the violation of such laws by the Service Provider or its personnel, including the sub-contractors and their personnel. The Service Provider shall not indemnify the NCMH to the extent that such liability, damage, claims, fines, penalties, and expenses were caused or contributed to by a fault of the NCMH.
- k. All outputs of the project such as specifications, designs, reports, and other documents, materials, data and/or software developed by the Service Provider for the NCMH shall become and remain the property of the NCMH, and the Service Provider shall not later than upon termination or expiration of the Contract, deliver all outputs to the NCMH, together with a detailed inventory thereof. The Service Provider may retain a copy of outputs but use of are subject to the restrictions about future use of these outputs, documents and software, is subject to the approval of NCMH.

- i. Copyright. The Intellectual Property Rights in all deliverables shall remain vested in the owner of such rights.
- m. Personnel of the Service Provider shall sign a Non-Disclosure Agreement to protect information that are confidential and/or sensitive information in which the loss of, misuse of, or unauthorized access to or modification can adversely affect the national interest of the country, conduct of the NCMH's programs, or the privacy to which an individual is entitled.
- n. Abide by all the terms and conditions stipulated in the project contract.

**VIII. Desired Qualification of the Service Provider**

- 1. Expertise required Extensive knowledge, professional background and technical experience in the deploying, commissioning and testing of network active components.
- 2. At least 10 years minimum number of experience
- 3. At least four (4) similar projects undertaken /managed of similar nature completed to any government or private entity.

**Similar project** refers to management services related to establishment and operations, including installation, configuration, interoperability, and application of security and industry standards for call center service.

**IX. Warranty Period and Services**

- 1. Period: One (1) year warranty is required on all delivered goods and shall take effect immediately after final acceptance of the project with NCMH.
- 2. Product upgrades: Hardware firmware or software upgrades without additional cost to NCMH.
- 3. Preventive and Remedial Services:
  - a. Preventive maintenance services were conducted semiannually via remote access and with coordination with NCMH System Administrators and annual on-site visits during the warranty period.
  - b. Provision of usage statistics
- 4. Provider Technical Support
  - a. Must have experienced and trained technical staff or engineers under its direct employment and supervision in rendering the required maintenance
  - b. Help Desk support 24/7 including holidays
  - c. Single point of contact
  - d. Support by phone, text, email, or other online/electronic means
  - e. Unresolved issues or problems shall be serviced on-site. Once on-site, the service provider/ or supplier must repair the malfunctioning equipment, software, and hypervisor provided equipment has been operated in normal conditions.

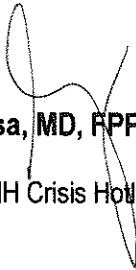
**X. Time of Completion**

The supply and delivery of overall output on the current project shall be completed within **One Hundred Twenty Calendar Days (120 days)**.

**XI. Project Cost**

The financial proposal shall not exceed the approved budget for the contract (ABC) of Nine Hundred ninety five thousand pesos (Php 995,000.00) inclusive of taxes and duties. Those exceeding the ABC shall be automatically rejected. The cost will be charged against the sub-allotment fund SAA no. 2023-04-002193 dated April 26, 2023 (DO 2023-0226).

Prepared By:



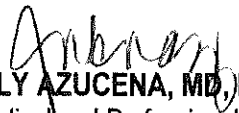
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Medical Specialist III  
Program Director, NCMH Crisis Hotline and Center for Wellness

Noted by:



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Recommending Approval:



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Chief Medical and Professional Staff II  
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Approved By:



**NOEL V. REYES, MD, FPPA, MMHoA**  
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