



Republic of the Philippines  
NATIONAL POLICE COMMISSION  
**NATIONAL HEADQUARTERS, PHILIPPINE NATIONAL POLICE**  
**OFFICE OF THE CHIEF, PNP**  
Camp BGen Rafael T Crame, Quezon City

OCT 06 2020

**MEMORANDUM CIRCULAR**

**NO.: 2020-067**

**GUIDELINES AND PROCEDURES IN THE ESTABLISHMENT AND  
INSTITUTIONALIZATION OF THE PNP ONE NETWORK (PON)**

**1. REFERENCES:**

- a. Republic Act No. 10175 otherwise known as Cybercrime Prevention Act of 2012 entitled "An Act Defining Cybercrime, Providing for The Prevention, Investigation, Suppression and The Imposition of Penalties Therefor and For Other Purposes" enacted on September 12, 2012;
- b. Republic Act No. 10173 otherwise known as Data Privacy Act of 2012 entitled "An Act Protecting Individual Personal Information in Information and Communications Systems in The Government and The Private Sector, Creating for This Purpose A National Privacy Commission, and for Other Purposes" created on August 15, 2012;
- c. Republic Act No. 8792 otherwise known as The Philippine E-Commerce Law entitled "An Act Providing for the Recognition and Use of Electronic Commercial and Non-Commercial Transactions, Penalties for Unlawful Use Thereof and Other Purposes" enacted on June 14, 2000;
- d. National Computer Center Memorandum Circular Number 2003-01 entitled "Guidelines on Compliance to e-Commerce Act (RA No. 8792) and Stage 2 and 3 of the UN-ASPA Five Stages of e-Government dated July 31, 2003;
- e. Digital Transformation Governance Committee Resolution No 2020-03, adopting the PNP One Network 8 Phases as the Interconnectivity Road Map of the PNP;
- f. PNP Memorandum Circular Number 2012-003 entitled "Policy Guidelines on Security Consciousness and Secrecy Discipline in the Recording, Uploading, Posting or Dissemination of Information via the Internet or through other Information and Communications Technology (ICT) Devices by the PNP Personnel" dated May 20, 2012;
- g. Chief, PNP Letter of Instruction 03/09 (Spider-Web) dated November 11, 2009; and
- h. Approved PNP ICT Master Plan (S.M.A.R.T. Policing) dated November 16, 2018.

**2. RATIONALE:**

The PNP acknowledges that one of the major hindrances in the effective delivery of police service is the problem in the sharing of data and information within the different units of the organization. This has been established as one of the reasons in the delay of decision making, policy making, and delivery of police service to the

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people. While various PNP offices and units have adopted to the technological revolution, their systems are so called "exclusive" to them.

The PNP leadership realized that the organization must advance into an era of integrated services, shared information, and common governance to improve police performance and efficiency and to reduce operational costs.

Thus, the PNP ICT Master Plan dubbed as S.M.A.R.T. (Secured Mobile Artificial Intelligence-Driven Real Time Technology) Policing, the Road Map of the PNP towards attaining a digitally transformed PNP was adopted. With its S.M.A.R.T. Policing initiative, the PNP can further address the country's problems on narcotics, criminality, terrorism, cybercrime, and corruption as all police commands and sub-units nationwide will be digitally connected en route to having an expansive evidence-based, data-driven law enforcement database, tactics and strategies.

The projects and programs in the PNP S.M.A.R.T. Policing were identified by the Directors of Directorial Staffs, Regional Directors of Police Regional Offices, and Directors of National Support Units during the Antipolo DigiCon or the PNP Digital Convention held in Antipolo City on November 12, 2019.

To realize the goals of S.M.A.R.T. Policing, the participants of DigiCon agreed that there is a need to establish a PNP exclusive network that will cater to the communications need of the organization because the use of the existing commercial internet providers may jeopardize data security. With this, the PNP One Network (PON) was conceptualized. The PON is an ICT infrastructure project designed to be robust, reliable, highly available, scalable, and easy to deploy. It aims to integrate all the communications networks being used by the PNP by providing connectivity, Intranet, and Internet.


Thus, during the Digital Transformation Governance Committee meeting on May 28, 2020, PON was adopted as the Interconnectivity Road Map of the PNP to be implemented in eight phases. With this, it is envisioned that in the near future, the PNP will have its own network dedicated for its exclusive use to make communication faster, reliable, and more secured.

### **3. SITUATION:**

At the start of 2020, the world was plagued by the COVID-19 pandemic which adversely affected not only the world economy but has greatly changed the way of living and the doing of business of the people.

In the Philippines, while the government has undertaken measures to prevent the further spread of the COVID-19 virus, it has also prepared programs for its people to mitigate the risks and continue their lives under the "new normal" condition. All organizations and every citizen are enjoined to adopt to the changes brought about by the pandemic.

One of the most prominent changes people and organizations need to adopt is in the aspect of communications. As social distancing is encouraged, physical meetings and conferences have to be limited and these have to be done virtually. At present, various Information and Communications Technology (ICT) hardware and software are being used for communications in lieu of personal meetings. The

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efficiency and success of these meetings, however, are largely dependent on the communications highway or network they use.

Like other organizations, the PNP is entirely dependent on commercial service providers and telephone companies which are not only more expensive but are also prone to security breaches.

At present, the general communications network of the PNP can be categorized into voice, video, and data. The PNP utilizes different systems and are independent with each other's network. These systems are the IPPBX (digital), PABX (analog), Telephone lines, Mobile phones, HF/SSB (Tactical Radio), VHF/UHF (Analog - Motorola), VHF/UHF (Digital - DMR), VHF low band (Tactical Radio), CCTV (Digital), CCTV (Analog), Cable TV, and Data (Internet, Intranet, and WAN). Each of these systems uses and builds its own network which is very costly, hard to sustain, difficult to maintain, not interoperable, and most of the time proprietary.

Thus, to integrate all these systems, a systematic and modular implementation must be strategized. Hence, this Memorandum Circular (MC) was crafted to have an orderly prioritization of unification of all networks which will establish and institutionalize the PON.

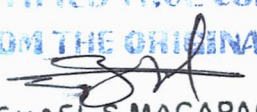
#### **4. PURPOSE:**

This MC prescribes the guidelines in the establishment and institutionalization of the PNP One Network and all of its eight stages.

#### **5. DEFINITION OF TERMS:**

- a. Access layer - This layer shall connect the users or clients to the PON via hubs, switches, and access points.
- b. Core layer - This layer is considered as the backbone and brain of the network. The PON core layer shall comprise a minimum of 10gbps link to its routers and switches using a high-speed cable such as fiber optic cables. This connects the uplink or internet connection to the distribution layer.
- c. Digital Transformation Governance Committee (DTGC) – is the highest committee responsible for transforming the PNP toward digitalization and the champion in the adoption and institutionalization of the SMART Policing Roadmap. It is Chaired by TCDS and Vice Chaired by TDICTM. Members of the Committee are the other D-Staffs.
- d. Distribution layer - This layer shall connect the core layer to the access layer. This includes LAN-based routers and layer 3 switches with a minimum speed of 1gbps per port. This layer ensures that packets are properly routed between subnets and VLANs in the PON.
- e. Information and Communications Technology (ICT) – The totality of the electronic means employed to systematically collect, process, store, present, and share information to end-users in support of their activities. It consists of computer systems, office systems, consumer electronics and telecommunications technologies, as well as network information infrastructure the components of which include the telephone system,

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the Internet, fax machines, computers and its accompanying methodologies, processes, rules, and conventions. A combination of computer technology, microelectronics applications and communications information techniques and methods, it encompasses the use of computers, data communications, office systems technologies, as well as any technology that deals with modern day application of computing and/or communication. It can also be the affiliation of information technology and data communication.

- f. Information System (IS) – A system of major processes or operations which facilitates the storage, processing, retrieval, and generation of information for decision-making, planning, controlling, and monitoring purposes. It also refers to a group of related processes (manual or computerized) designed to generate information for the exclusive support of a major functional area of the PNP.
- g. Information System owner – PNP office/unit that uses Information System in pursuit of the accomplishment of their mission and functions. Owner must have administrative and operational control over such Information System through their designated system administrator.
- h. Internet – A worldwide interconnected networks using standardized communication protocols. It is popularly referred to as the Information Superhighway, the Web, or simply as the Net.
- i. Internet Service Provider (ISP) – An entity or company that provides connection services to the Internet. Access to the Internet is provided through its facility linked to the Internet. Such service provider may be a commercial entity, an institution, a university, or any other entity that has already a link to the Internet.
- j. Internet Protocol-Private Branch Exchange (IP-PBX) – A system that connects telephone extensions to the public switched telephone network and provides internal communications for the PNP.
- k. Internet Protocol version 6 (IPv6) - The most recent version of the Internet Protocol (IP), the communications protocol that provides an identification and location system for computers on networks and routes traffic across the Internet. IPv6 was developed by the Internet Engineering Task Force (IETF) to deal with the long-anticipated problem of IPv4 address exhaustion. IPv6 is intended to replace IPv4. (source: <https://en.wikipedia.org>)
- l. Internet Protocol Virtual Private Network (IP VPN) – Considered as layer 2, meaning it avoids public internet by traveling on a private connection to each remote site, so the PNP databases connected to PON remains secure. Plus, as a layer 2 service, IP VPN uses multiple protocol system (MPLS) capabilities that prioritize PON internet traffic, so critical applications like video conferencing and digital voice are guaranteed the bandwidth they need to perform.

hardware and facilities (including data centers), data storage and retrieval, network systems, legacy interfaces, and software to support the business goals of an enterprise. The structure also includes hiring, training, policy, testing, process, upgrades, and repairs.

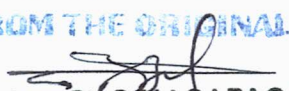
- n. Local Area Network (LAN) – A network of computers that are in the same general physical location, usually within a building, compound or a camp that serves users within a confined geographical area.
- o. Project Management Team (PMT) – The project management team includes the project manager and the group of individuals who work together on a project to achieve its objectives. It consists of the project manager, project management staff, and other team members who are maybe not directly involved with management but carry out the work related to the project.
- p. PNP One Network (PON) - A dedicated communications network that is owned and managed by the PNP for its exclusive use. It is an ICT infrastructure project that will integrate all the communications network being used by the PNP by providing connectivity, both Intranet and Internet.
- q. Uplink layer - This layer is considered as the gateway to the internet. It provides connection from the core layer to the Internet. The PON uplink layer shall comprise a minimum of 1gbps link.
- r. User/Client – The user of a workstation, mobile device, tablet and the like connected to a network.

## **6. GUIDELINES:**

### **a. General Guidelines:**

- 1) The PON shall integrate all the existing and future networks of the PNP using Internet Protocol version 6 (IPv6) as the baseline standard;
- 2) The initial order of establishment of PON may only be revised by the authority of the Digital Transformation Governance Committee (DTGC) upon the recommendation of TDICTM;
- 3) Need in the accomplishment of the mission of the PNP shall be the priority in the establishment of connectivity and Intranet;
- 4) The establishment of the connectivity and intranet shall only use available technologies that are open standard/architecture for easy interoperability and must be cost-efficient;
- 5) TDICTM shall be the final approving authority in the use of technologies that are on trial or beta state;
- 6) D, ITMS shall be the final approving authority in the configuration of network in relation to Information Systems;


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- 7) D, CES shall be the final approving authority in the configuration of network in relation to Communications Systems;
  - 8) All PNP Information and Communications Systems shall primarily use PON as the means of transport;
  - 9) All ICT services, such as Wi-Fi, Internet, VPN, Vlan, and the like, shall use PON as the means of transport;
  - 10) TDICTM shall be the final approving authority in the deployment of ICT services mentioned in the preceding paragraph and in the usage of PNP Information Systems of the network;
  - 11) All PNP units and offices may only avail of commercial ICT services when PON is not available in their area and/or cannot provide such services;
  - 12) The Project Management Team (PMT-PON) shall directly oversee the implementation of the establishment and institutionalization of PON;
  - 13) All existing Technical Working Groups (TWGs) on connectivity, Intranet, Wi-Fi, and anything related to network shall closely coordinate with the PMT-PON to harmonize the plan in the establishment and institutionalization of PON;
  - 14) The PMT-PON shall be organized as shown in Annex "A"; and
  - 15) Funds from all sources which has connectivity component shall be assessed and consolidated for PON for cost efficiency, rapid establishment, and effectiveness.
- b. Specific Guidelines:**
- 1) In terms of connectivity, the PON shall comprise the following functional areas such as Uplink layer, Core layer, Distribution layer, and Access layer;
  - 2) PMT-PON shall be primarily responsible for the planning and design of the Uplink, Core and Distribution layer of PON, including its implementation;
  - 3) All PNP major units/offices, namely: Command Group, D-Staffs, P-Staffs, NSUs and PROs, shall designate a PON Officer preferably a PCO either an ITMS and CES personnel, who shall be responsible for the planning, design, and implementation of PON at the Access layer;
  - 4) All PNP major offices/units, through their PON Officer, shall identify and choose a site for the installation of PON devices with the following amenities, when applicable:
    - a) Access to existing Internet connectivity (preferably multiple Internet Service Providers (ISPs) to combine them together);

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- b) Access to stable electric power source (220VAC, single phase, 500W);
  - c) Secured access to cable laying (preferably with existing LAN cable or access going to the existing internet router/switch port); and
  - d) Indoor location with good ventilation (preferably air-conditioned room but not required) secured from rain, dust, moisture, and direct sunlight.
- 5) All PNP major offices/units, through their PON Officer, shall submit lay-out of existing LAN and lay-out plans of their unit and units/offices under their jurisdiction, as the case may be, to the PMT on a monthly basis;
  - 6) All PNP major offices/units, through their PON Officer, shall update the list of all existing Internet Connections (Bandwidth, Speed and Monthly Subscription Cost of each ISPs) of their unit and units/offices under their jurisdiction, as the case may be, to CES on a monthly basis;
  - 7) The IP-PBX System in every camp must be designed to connect and be connected to and by the PON;
  - 8) All Certified PNP Information Systems (IS) must pass through the PON. Security of the IS utilizing the PON is the responsibility of the IS and Database Owner; and
  - 9) Only PNP-owned desktop computers, laptops, mobile devices, tablets and the likes are allowed to utilize the PON, unless TDICTM provides exemption due to exigency of the service.

**c. Responsibilities:**

**1) TCDS**

- a) Oversee the implementation of PON through the DTGC; and
- b) Perform other tasks as directed.

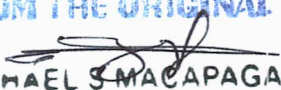
**2) TDPRM**

- a) Issue orders for the PMT; and
- b) Perform other tasks as directed.

**3) TDC**

- a) Provide funds for the implementation of this MC; and
- b) Perform other tasks as directed.

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**4) TDICTM**

- a) Supervise and monitor the implementation of this MC;
- b) Establish and institutionalize the PON at the Uplink, Core and Distribution Layers;
- c) Designate a Team Leader/Project Manager of PMT-PON;
- d) Designate the Head and Members of the PMT-PON Secretariat;
- e) Recommend to DTGC the revision on the order of establishment of PON, when necessary;
- f) Approve the use of technologies that are on trial or beta state in PON;
- g) Approve the Information System which will use the PON as transport;
- h) Approve the use of ICT services, such as Wi-Fi, Internet, VPN, Vlan, and the like, that will affect PON;
- i) Approve the use of BYOD (Bring Your Own Device) to connect to the PON;
- j) Create a training team to train the users of the PON; and
- k) Perform other tasks as directed


**5) ITMS**

- a) Assist DICTM in the establishment of PON;
- b) Monitor the installation of PON devices;
- c) Configure the PON in relation to Information Systems;
- d) Provide technical assistance to the PMT and PON Officers; and
- e) Perform other tasks as directed.

**6) CES**

- a) Assist DICTM in the establishment of PON;
- b) Monitor the installation of PON devices;
- c) Configure the PON in relation to Communications Systems;
- d) Provide technical assistance to the PMT and PON Officers; and
- e) Perform other tasks as directed.

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**7) All Heads of PNP Offices/Units**

- a) Assist DICTM in the implementation of this MC;
- b) Designate a PON Officer in each office/unit down to their lowest offices/units;
- c) Establish and institutionalize PON in their respective offices/units down to their lowest offices/units; and
- d) Perform other tasks as may be directed.


**8) PMT-PNP**

- a) Plan and design the Uplink, Core and Distribution Layers of the PON;
- b) Implement the plan and design of the Uplink, Core and Distribution Layers of PON;
- c) Provide training and reorientation of technical personnel and clients/users;
- d) Recommend to TDICTM the use of technologies that are on trial or beta state in PON;
- e) Recommend to TDICTM the Information Systems which will use the PON as transport;
- f) Recommend to TDICTM the use of ICT services, such as Wi-Fi, Internet, VPN, Vlan, and the like, that will affect PON; and
- g) Perform other tasks as directed.

**9) PON Officers**

- a) Act as Network Administrator of his unit;
- b) Plan and design the Access Layer of their network down to their lowest offices/units;
- c) Submit monthly update on their internet connection down to their lowest offices/units to CES;
- d) Identify location where PON devices will be installed;
- e) Supervise establishment and institutionalization of PON;
- f) Submit existing network lay-out and plans to PMT on monthly basis; and
- g) Perform other tasks as directed.

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## **7. PROCEDURES:**

### **a. Planning and Design**

The DTGC shall convene to plan and design the implementation of PON. The Committee will plan the strategies to be adopted for the success of the PON, at the same time, it will also chart contingency measures if problems may arise.

During the planning stage, the equipment, infrastructure, and subscription requirements shall be identified, including the cost of purchase and operations.


In the design of the infrastructure, services of IT experts may be outsourced, when needed but they should first undergo a Complete Background Investigation (CBI) to ensure that the security of the system and data is protected.

### **b. Installation**

TDICTM will head the installation of PON in the different offices and units, following the eight stages. The initial order of establishment of connectivity of the PNP One Network (PON) shall be as follows:

- 1) Stage 1 – establishment of the Core Network in Camp BGen Rafael T Crame preferably in ITMS, which will serve as the brain of the network and will handle all network traffic;
- 2) Stage 2 – establishment of connectivity from the core network to the 17 Police Regional Offices (PROs);
- 3) Stage 3 – establishment of the LAN or Intranet in and between offices, buildings, and facilities inside Camp BGen Rafael T Crame and PRO camps; There shall be 18 sub-stages representing each major camp;
- 4) Stage 4 – establishment of connectivity from the core network to 81 Police Provincial Offices, 20 City Police Offices, and five District Offices of NCRPO;
- 5) Stage 5 – establishment of the LAN or intranet in and between offices, buildings, and facilities inside the camps in Stage 4; There shall be 106 sub-stages representing each camp;
- 6) Stage 6 – establishment of connectivity from the core network to the 1,766 Police Stations;
- 7) Stage 7 – establishment of connectivity from the core network to the 123 Mobile Forces Headquarters; and
- 8) Stage 8 – establishment of connectivity from the core network to the 35 training institutions/schools/centers and its LAN or Intranet.

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**c. Use and Maintenance**

PON Officers shall take responsibility of the equipment and the system. They shall ensure the security and maintain that all PON equipment shall be running 24/7, unless there is breakdown, maintenance, and repair.

**d. Upgrade and Retirement**

It is acknowledged that the equipment to be used in the PON may wear out because of age or may be damaged due to man-made or natural disasters. As such, immediate replacement is imperative.

In the replacement or upgrade, however, the DTGC should craft a Protocol or Guidelines to be followed to guaranty immediate availability of the network.

**e. Training**

To ensure the proper implementation of the PON, TDICTM may organize a Training Team to orient all the users/clients of the network. Training will be continuous; it should not stop after the set-up of the infrastructure, it will continue during its implementation and every time there are changes and updates in the network systems.

Likewise, PON Officers shall assign a dedicated maintenance team/personnel for each unit/office which will be trained in the operation of the network.

**f. Monitoring And Evaluation:**

The DTGC shall create a National Monitoring and Evaluation Committee (NMEC) to monitor the implementation of PON and conduct semi-annual evaluation of its effectiveness and efficiency as a tool in helping the PNP perform its mandate. The Committee shall likewise conduct random check of the system in the offices nationwide, as often as needed.

The NMEC may also create Regional Monitoring and Evaluation Committees in the PROs who will periodically report observations, problems and other concerns regarding PON.

**8. ADMINISTRATIVE SANCTIONS:**

Any violation of the provisions of this MC shall be dealt with administratively in accordance with the provisions of applicable laws, rules and regulations.

**9. REPEALING CLAUSE:**

All existing PNP directives and other issuances which are contrary to and/or inconsistent with the provisions of this MC are hereby rescinded or modified accordingly.

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#### 10. EFFECTIVITY:

This MC shall take effect after 15 days from filing a copy thereof at the UP Law Center in consonance with Section 3, Chapter 2, and Book VII of Executive Order 292 otherwise known as the "Revised Administrative Code of 1987," as amended.



  
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Police General  
Chief, PNP

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Distribution:

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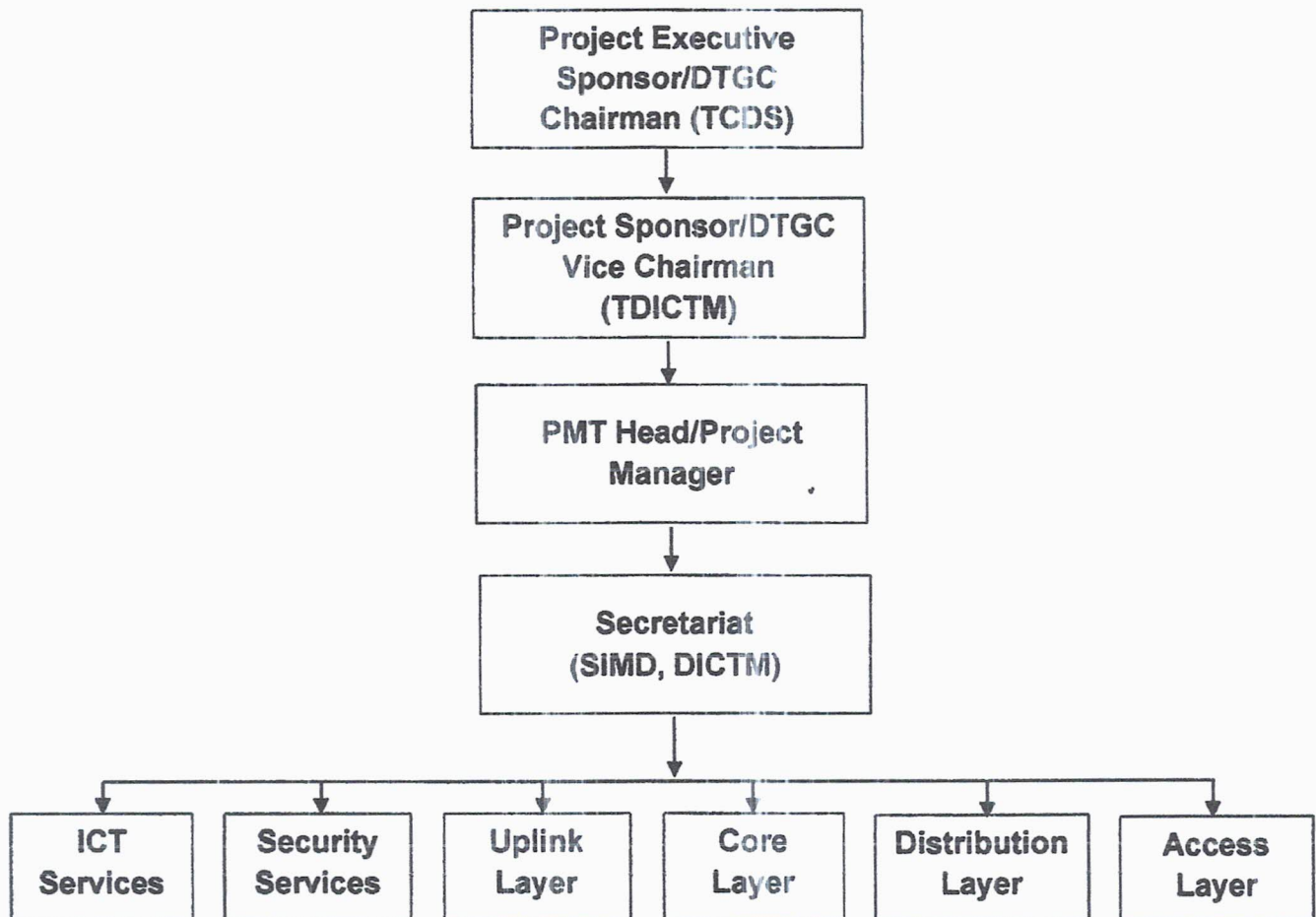
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**Annex "A" – MC on Guidelines and Procedures in the Establishment and Institutionalization of the PNP One Network (PON)**

**Hierarchy of Project Management Team (PMT-PON)**



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