

INTRODUCTION TO JUDICIAL INFORMATION TECHNOLOGY POLICY

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1 INTRODUCTION

1.1 What is a *policy*?

Policy is defined by the Oxford Advanced Learner's Dictionary as "*a plan of action agreed or chosen by a political party, a business, etc.*" A more elaborate explanation is given by WIKIPEDIA, the online free encyclopaedia. It defines Policy as a "a deliberate system of principles to guide decisions and achieve rational outcomes. A policy is a statement of intent, and is implemented as a procedure or protocol. Policies are generally adopted by the Board of or senior governance body within an organization whereas procedures or protocols would be developed and adopted by senior executive officers. "

1.2 Types of Policy

There are different types of policies. Most common ones fall under Government policies which include Foreign policy, Defence Policy, Environment Policy, Housing Policy, Monetary Policy, Immigration Policy etc. Other common Policies fall under Company or Organizational Policies and these include Privacy policy, Security policy, Health and Safety Policy, Recruitment policy, Dressing Policy or "Dress Codes", compensation policy etc. Another organizational policy example is the Employee Relations policies which "*express the philosophy of the organization and what sort of relationships are wanted between management and employees and, where necessary, their unions, and how the pay-work bargain should be managed*". (Armstrong, 2006).

1.3 I.T. Policy

An I.T. Policy is a set of principles adopted by an organization to guide the acquisition, development, usage and withdrawal of Information and Communications Technology within an organization. These set of principles,

which essentially forms the basis for an I.T. Strategy for the organization will be contained in a Document (or sets of Documents) that must be approved by the Management of the organization. A standard I.T. policy document will cover several topics related to the acquisition or use of ICT in an organization such as the following:

1. Access control
2. Acceptable Use of IT
3. Use of Software
4. Protection from Malicious Software
5. I.T. Security
6. Physical and environmental security
7. Incident response (for managing security breaches and other Incidences)
8. Bring your own device (BYOD) or personal artefacts (e.g. BYOA, BYON, BYOC etc)
9. Mobility
10. Telecommuting
11. Email use
12. POPI Policies
13. Internet use
14. Technology or device management (like laptops, cell phones, or cameras)
15. Mobile technology
16. Monitoring or interception of communications
17. User accounts and passwords
18. Backing up of information
19. External facing and internal facing privacy policies
20. Social media
21. Digitisation (or document imaging) policies
22. Email archiving policies
23. Electronic signature guidelines

1.4 Background to JITPO

From the foregoing sections, it can be garnered that a successful IT environment must have a standard set of principles to guide its IT initiatives. The Judicial Information Technology Policy (JITPO) serves this purpose for the Nigerian Judiciary.

The former Chief Justice of Nigeria, Honourable Justice Dahiru Musdapher, GCON (Rtd) inaugurated the Judicial Information Technology Policy Formulation and Implementation Committee (JITPOCOM) on the 30th of January, 2012. One of the main task of the Committee was to develop a comprehensive Information Technology Policy which could be implemented in all Jurisdictions of the Nigerian Judiciary. The Committee's other major tasks include the selection, adoption and implementation of suitable ICT solutions for the Nigerian Judiciary such as a CCMS and a Cloud-based eMail Solution. The Committee's efforts yielded the publication of the JITPO policy document, which was formally launched by the then Chief Justice of Nigeria, Honourable Justice Dahiru Musdapher, GCON (Rtd), in July, 2012.

1.5 Benefits of the JITPO

It is pertinent to note that the JITPO was deigned to be a standard I.T. Policy document, which was peer-reviewed by Consultants from the National Centre for State Courts (NCSC), USA. The remote and immediate benefits of the JITPO include:

- ✓ It eliminates chaotic situations created mostly by itinerant IT Vendors
- ✓ It provides enlightenment to Management and Staff alike
- ✓ It provides guidance to existing or would-be IT Vendors
- ✓ Advises Jurisdictions on ICT Projects' prioritizations

- ✓ It provides a framework for IT investments in Courts
- ✓ Advises Jurisdictions on IT organizational structure
- ✓ Ensures ICT standardization and synergy across Jurisdictions, and hence portability of Technology across Jurisdictions
- ✓ It creates opportunities for convergence of solutions, and hence allow cost reduction in IT investments.

2 CRITICAL AREAS OF JITPO

The JITPO policy document covers a lot of areas that can be considered as CSF (critical success factors) to effective ICT utilization in Nigerian Courts. In order to fully grasp the significance of the policy document, we should emphasize and explain a few:

- a) **I.T Functional Areas:** the JITPO policy document provides advice on areas that IT need to be integrated for maximum benefits to the Courts. The areas specified includes the chambers of the Hon. Justices, the Courtrooms, the Litigation Department or Unit, and the Central Administrative Units (i.e. Finance, Cashiers office, HR, Library, Central Store etc). The document also specifies the kinds of IT solutions that can be implemented in these areas and advices on those that can be shared facilities to reduce investment costs, and how they can be shared (i.e. using WAN, LAN, VPN etc).
- b) **Network Planning and Feasibility Study:** Computers are usually connected by cables (called wired network) or through wireless technologies (Comer, 2008) such as Microwave, Radio, Laser, Infrared,

Satellite, Wi-Fi (all called Wireless Network). Depending on the extent of geographical coverage, a network may be termed as LAN (Local Area Network) or WAN (Wide Area Network). Computer Networks allow information to be transmitted and shared across several and often-times dissimilar computers, regardless of geographical dispersion.

The JITPO policy document encourages all judicial organizations to carefully plan their network infrastructure after conducting a detailed feasibility study. The Network plan must provide for future expansion and adequate security requirements. A fault tolerant and redundant network can be achieved by structuring the LAN as a layered model and developing the LAN infrastructure one step at a time. Network services such as Domain Name Services (DNS), Dynamic Host Configuration Protocol (DHCP) should be installed and configured for efficiency. All judicial organizations are also encouraged to implement wireless network within their various localities.

- c) **Site selection:** The network server room should be located away from the exterior walls of the building to avoid the heat gain from windows and exterior wall surfaces. There should be sufficient floor loading capability for computer equipment. To eliminate the effect of electromagnetic interference, the computer room should be located away from generator room, lift plant room, or in some cases, the radar or telecommunication control rooms.
- d) **Fitting out requirements:** All materials to be used in the computer room should be non-combustible, self- extinguishing or fire retardant and have the properties of smooth surface finishing and non-dust shedding. Any pipes and ducts not serving the computer room should be removed.

- e) **Raised Floor:** The JITPO policy documents recommends the use of Raised floors in the server rooms because it provides spaces for cable running, protects the cables, plugs and power connectors, and also serves as air podium for conditioned air distribution.
- f) **Electrical Requirements:** "CLEAN" and dedicated power source is recommended for all computer equipment in conjunction with the use of an electrical noise protection device or power conditioner to prevent electrical noise disturbance. For maximum reliability, the independent feeder for the computer equipment must not be shared with other electrical devices. Sufficient capacity should be planned as is required for various computer loads and future expansions / increase of computer equipment. It is also advised that qualified power consultants (possibly from the computer equipment vendors) be contacted for the power specifications. Alternative power sources should be considered for equipment and data Centers or server rooms. Technologies to recommended include UPS, Battery Banks and inverters as well as Solar Power etc.
- g) **Climate Control:** the policy recommends the control of the temperature and relative humidity within the specific ranges automatically and independently. To achieve this, an independent air-conditioning system with full backup is required. Spare capacity of 50% is recommended for anticipated expansion. Power source of the air-conditioning system should be separated from those for computer equipment and connected to an emergency power supply. The system can be either water-cooled or air-cooled depending on the equipment specifications.
- h) **Hardware :** The JITPO policy document recommends that the input of the ICT department must be sought prior to the procurement of any

Information Technology Hardware or Software. The ICT Department should be responsible for vetting requisitions for IT equipment on behalf of any Department prior to obtaining approval to procure such equipment. The ICT department will provide standard models for desktop, Printers and portable devices.

- i) **Portable Devices:** Advancements in miniaturizations have also led to the development of several portable but yet powerful devices. These devices have internal storage and Operating systems installed that enable them to store data and execute software just like a desktop Computer, and hence, they can be used for small-scale to medium-scale computing, especially in transit. Such devices include Smartphones, Tablets (iPad), and Phablets. Some Legal Software (such as Law Pavilion and Legalpedia) can run on these devices.

Acquisition of portable devices should be reviewed by the ICT Department. Only devices which have been built to ICT published standards and/or from approved suppliers, should be attached to the data network. This should ensure that appropriate security controls have been built into the implementation. Once received, the user is not authorized to change any security device setting without reference to the ICT Department, as this may affect the security of the device, or stop it functioning with the supplied service.

The policy document advises that Bring Your Own Device (BYOD) devices should only be allowed where they meet in-house security standards. According to Miller, Voas, and Hurlburt (2012).. *“When an employee attaches a personal smartphone or tablet to an organizational network or machine (be it wired or wireless), it makes sense to worry*

about overall security. First, as soon as external (personal) devices are attached, malware could migrate from the personal device into the company's machines and over the company's networks. In the other direction, sensitive data is likely to make its way onto the personal devices. This data could include customer information that should be kept private and company information that should be kept proprietary."

Hence, all intending users of BYOD must seek approval from the ICT Department.

- j) **Software:** The policy document provides that all software acquisitions and applications requirement must be reviewed and processed through the ICT Department to ensure compatibility with the network architecture and software licensing restrictions of the organization. All software (including any program disks, licensing materials, and other supplemental materials included in the software purchase) must remain in the possession of the ICT Department at all times. These materials may only be removed from the ICT Department storage location by an authorized employee who provides written authorization from his/her Departmental Head. Available upgrades must be acquired as soon as available, as outdated software can lead to problems as well as system crashes and may lack features that can be found in up to date versions of the software. Old software may even leave the organization vulnerable to cyber-attacks.
- k) **Customized Software and Enterprise Resource Planning (ERP) Software:** Judicial bodies are encouraged to acquire and implement state-of-the-art customized software and / or ERPs. Adequate business cases and user requirements must be developed and documented before the selection of appropriate *customized* software or ERPs. A typical ERP can

offer “*improved resource allocations and system-wide standardizations.*” (Bendoly & Schoenherr, 2005).

- l) **Web Portal:** The JITPO document encourages all Jurisdictions to develop and maintain a corporate **web portal**. Web portals are usually integrated with existing business processes, by portal owners, with the hope of creating a cost effective channel to communicate with users, e.g., potential and existing customers, as well as other stakeholders (Yang, Cai, Zhou, & Zhou, 2005). Web portals allow users to become more acquainted with an organization and also to interact with the organization.

The Policy document advises that each judicial body must have a current, educative, informative and qualitative website which will have information on various aspects of the organization that is beneficial to judges, legal practitioners, court officers, general public, etc. The website would contain details of the structure of various operational arms of the judicial body, history, jurisdiction, rules, judges profile, location map, types of courts, contact details, guidelines, Bar associations, case-status, judgments, orders, applications, etc.

- m) **Electronic Document Management System (EDMS):** The policy document encourages all judicial organizations to acquire and install/implement an electronic document management system in order to reduce volumes of paper consumption and hasten information storage and retrieval. Benefits of adopting EDMS include easy search and retrieval of all records and associated files and documents as well as reduction in man hours required for storage and retrieval of stored documents.
- n) **Virtual Library:** Judicial Organizations are encouraged to establish a Virtual Library for their development and growth. A virtual Library refers to all the library resources that are available online through computers

and databases. This can be made possible through subscription to online Libraries. Once the nature of work becomes decentralized and “teleworking” becomes inevitable, then there will be need for virtual libraries (Sreenivasulu, 2000). Each judicial organization is encouraged to subscribe to online libraries in order to grant judges and officers access to pertinent articles, databases, books, services, and other.

- o) **Unified Communication System and IP Telephony:** All judicial organizations are encouraged to implement Unified Communications in their organizations and various divisions. This is a solution that allows judicial organizations to eliminate telephone expenses incurred in calling their divisions and to make high quality voice and video calls within their private telephony infrastructure at NO COST! It enables Judicial Divisions route their inter-divisional calls through the existing Wide Area Network (WAN) and hence, avoid Public Switched Telephone Networks (PSTN) tariffs and “Access Charges”.

- p) **Security:** The JITPO document offers strong advises on securing both Wired and Wireless networks. One advice is to use regular sweeps with wireless monitoring tools to find and quickly close both vague access points and the Ad-hoc mode. Such experimentation by users should be discourage by ensuring everyone who wants wireless access has it, and by offering to solve wireless problems for users immediately. Users unhappy with IT are most likely to "help" IT by creating their own wireless networks. The policy also advises that all IT security measures be addressed promptly such as set up of passwords, Installation and updates of anti-virus software and Installation of IPS and IDS etc. The main difference between an IDS and an IPS is that an IPS responds immediately and does not allow any malicious traffic to pass, whereas an IDS allows malicious traffic to pass before it can respond (Patil, Rane, &

Meshram, 2012). The authors also talk about Deception Systems and Honeypots and the advantages they offer computer networks.

- q) **Internet Connectivity***:** The Policy emphasizes acquisition of suitable Internet Bandwidth for each Judicial body. The Internet is a crucial research tool and every judicial body is encouraged to have a high speed Internet connection. Judicial Officers should be provided with broadband connectivity in their chambers and their official residences to enable continuous access to the Internet and intranet with appropriate security. An Internet Service Provider should be selected after a thorough assessment of the facilities they have and the technology they can be deploy.
- r) **IT Governance and Control:** The JITPO policy document recommends establishment of some time-tested structures that assist to ensure the efficient adoption and utilization of ICT in an organization. These include:
- (i) ICT Committee: Each judicial organ is advised to establish an ICT Committee to oversee the formulation and implementation of ICT projects. In addition, the ICT shall be responsible for liaising with JITPCO-COM and implementing the policy directive of JITPCO.
 - (ii) Benefits Management: Each Judicial body is advised to adopt a formula for managing the benefits of their ICT investments. It is an integral part of change management. It details how an organization will benefit from change and provides a framework for identifying, planning, measuring and actively managing these benefits. While the success of project management is to deliver on time and on budget, the success of benefits management takes it one step further – to ensure that the projects delivers the expected results.

Indeed, benefits review should be a continuous process on ICT investments because it provides organizational learning (Ward & Daniel, 2006).

- (iii) Information and Communication Technology Department:** The policy document advises all Judicial bodies to create or upgrade their ICT units to a full-fledged ICT departments. In addition, each judicial organization is to restructure the ICT department to include industry standard ICT functions such as System Analysis, Web Development, Database Administration, Network administration, System Architecture, System Support and IT Service Management.
- (iv) ICT Skills Acquisition and Retention:** Judicial bodies are also advised to strive to attract and retain up-to-date and skilled ICT personnel. This could be achieved by creating incentives commensurate to industry standards. The IT personnel to be employed must be skilled in modern technologies: Linux; Windows Server Operating System; Open Office Suite; PHP, ORACLE, SQL Server and programming in JAVA; Web Designing; Server Administration etc.
- s) Service Management and Adoption of Industry Frameworks:** The JITPO policy advises on the adoption of international industry frameworks by all judicial bodies in the establishment, acquisition, management and administration of ICT in their respective jurisdictions. Examples of these frameworks include ITIL (Framework for providing quality IT service within an organization), COBIT (an IT governance framework and toolset that allows managers to bridge the gap between control requirements, technical issues and business risks), PMP

(Framework for effective IT Project Management) and CBAP (Framework for effective end user requirement engineering and management).

3 RECOMMENDATIONS

- It is highly desirable that each jurisdiction in the Nigerian Judiciary aspire to implement the guidelines provided by JITPO
- Jurisdictions should also explore opportunities to collaborate and share some ICT services and thus, reduce costs of implementation and maintenance
- More emphasis should be placed on the continuous ICT training for the Hon. Justices and also the rank and file of other Judiciary personnel
- ICT should exist as a unique department in all Jurisdictions and an efficient organizational structure created for the ICT (as advised in the JITPO document)
- Concerted efforts be continuously made to identify, select, and work with only reputable, experience and dependable ICT vendors and consultants, as this impacts heavily on the success or otherwise of ICT projects.
- There is a need to review the existing JITPO policy document to accommodate new processes and emerging technologies (e.g. Cloud Computing etc)

4 Conclusions

In less than forty (40) pages, the JITPO policy document succeeded in defining the strategies and roadmap necessary to launch the Nigerian Judiciary into an efficient ICT consumer. It systematically dealt with the three (3) critical success factors for ICT operations namely Technology, People, and Processes. This paper attempted to summarize all the issues in similar fashion.

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REFERENCES

- Armstrong, M. (2006). Human resource management practice. *London: Kogan page limited.*
- Bendoly, E., & Schoenherr, T. (2005). ERP system and implementation-process benefits: Implications for B2B e-procurement. *International Journal of Operations & Production Management*, 25(4), 304-319.
- Comer, D. E. (2008). *Computer networks and internets*: Prentice Hall Press.
- Miller, K. W., Voas, J., & Hurlburt, G. F. (2012). BYOD: Security and privacy considerations. *It Professional*, 14(5), 53-55.
- Patil, S., Rane, P., & Meshram, B. (2012). IDS vs IPS. *International Journal of Computer Networks and Wireless Communications*, 2(1).
- Sreenivasulu, V. (2000). The role of a digital librarian in the management of digital information systems (DIS). *The electronic library*, 18(1), 12-20.
- Ward, J., & Daniel, E. (2006). *Benefits management: Delivering value from IS & IT investments*: John Wiley & Sons Chichester.
- Yang, Z., Cai, S., Zhou, Z., & Zhou, N. (2005). Development and validation of an instrument to measure user perceived service quality of information presenting web portals. *Information & Management*, 42(4), 575-589.