

**SCHOOL OF COMPUTING AND INFORMATICS**

**DEPARTMENT OF INFORMATION TECHNOLOGY**

**INDUSTRIAL ATTACHEMENT REPORT AT**

**MINISTRY OF PUBLIC SERVICE, HUMAN CAPITAL DEVELOPMENT AND SPECIAL PROGRAMMES**

**STATE DEPARTMENT FOR PUBLIC SERVICE AND HUMAN CAPITAL DEVELOPMENT**

**FROM 19TH MAY, 2025 TO 19TH AUGUST, 2025**

**PRESENTED BY:**

**MERCY SYOMBUA KIMWELE**

**REG: BIT/2022/31477**

**THIS REPORT IS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE MOUNT KENYA UNIVERSITY AWARD OF BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY**

# DECLARATION

## Declaration by the Student

I, Mercy Syombua Kimwele, declare that this is my original work except for citations and quotations which have been duly acknowledged and has not been presented for any other degree or award at Mount Kenya University.

**Admission Number:** BIT/2022/31477

**Date: ………………………………**

**Signature: ………………………………**

## Confirmation by the Supervisor

This is to approve that this report was done under the supervision of the below-mentioned SDPS Supervisors and the University Supervisor.

**Name: Signature: Date:**

Beatrice Githieya

**Senior ICT Officer ……………………... ……………………….**

**Name: Signature: Date:**

Nyoro Michael Muiruri

**University Assessor ……………………... ……………………….**

# DEDICATIONS

I dedicate this work to Almighty God, my family, and the team of State Department of Public Service members for the role they have played in supporting me and imparting knowledge that has enabled me to pursue my career.

# ACKNOWLEDGEMENTS

First and foremost, I would like to acknowledge the Almighty God who has given me strength and enabled me to complete my attachment in good health. My industrial attachment supervisors, Madam Beatrice Githieya and Madam Elizabeth Njagi, university supervisor Mr. Nyoro Michael, and management of the State Department of Public Service, for their valued support, cooperation, and guidance during the attachment period. Lastly, but not least, my parents, whose prayers and support have enabled me to reach this stage. I am greatly indebted, and I feel great pride and pleasure in the accomplishment of this report.

# ABSTRACT

I completed my field industrial attachment at the State Department of Public Service and Human Capital Development as part of my Bachelor's program requirements. Going to the field away from classes was not just a necessity, but also important in exposing my personality and training me while preparing me for the work expected outside of university after I complete my bachelor's degree. This attachment report aims to give feedback to my awesome school, Mount Kenya University, and the School of Computing and Informatics, Department of Information Technology.

The report is important for field attachment to the life of a student. According to my personal view, my experience at the place of attachment, knowledge and skills obtained at the site attachment, as well as strengths and weaknesses.

# LIST OF ABBREVIATION AND ACRONYMS

**SDPS –** State Department for Public Service

**IT –** Information Technology

**ICT -** Information Communication Technology

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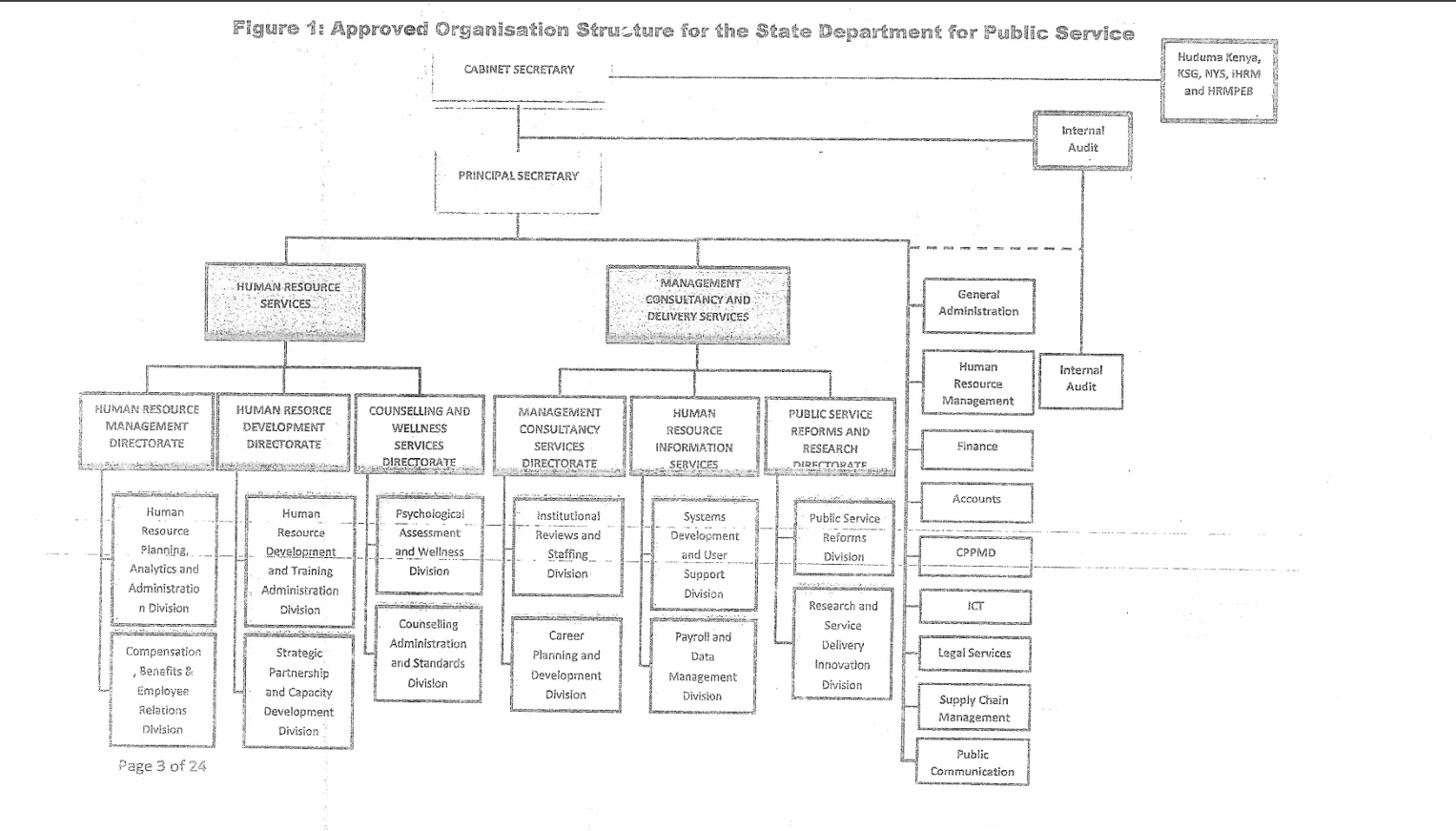
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## Figure : Organizational Structure



# CHAPTER ONE

## Introduction

Attachment is a pre-professional work experience that provides the student with the opportunity to gain experience in a particular field. It is a way to test the waters in various career fields to gain real-world experience and a means to decide on or opt out of certain vocations. Attachment provides students with a valuable opportunity to interact with and learn from highly experienced professionals. It also broadens the student’s understanding of their field and helps them in making decisions about what they want to specialize in.

## Background Information of the organization

The Ministry responsible for Public Service was started as the Establishment Division in 1947 under the then Office of the Chief Secretary. The role of the Division at that time was to handle all personnel work with regard to recruitment, posting, promotion, salaries, discipline, leave, passages, etc.  Its services were framed to support the colonial Civil Service and emphasis was laid on directives from the Colonial Office to ensure consistency and equity in handling individual officers’ matters.

In 1963, the Establishment Division was expanded to accommodate the training function due to the need to train Kenyan citizens in preparation for taking up management and middle-level posts. In 1964, the Directorate of Personnel Management was placed under the Office of the President to provide advisory services for the Government on the formulation and implementation of policy guidelines on personnel practices; and determination of establishment requirements of Ministries/Departments.

Over the years, the Ministry has undergone reorganization and change in portfolio mandates.  In the year 2023 the Executive Order No. 2 of November, 2023 placed the Ministry of Public Service, Performance and Delivery Management. Following the recent Presidential pronouncement on Government reorganization the Ministry was renamed as Ministry of Public Service and Human Capital Development.

## State Department for Public Service

### Mission

To provide Policy Leadership, Advisory Services, Technical Support, Coordination of Human Resource and Performance Management for Efficient Service Delivery in the Public Service.

### Vision

A Centre of Excellence in Performance Management with an Agile and Responsive workforce for Quality Service Delivery.

### Core Values

The Ministry is committed to upholding the following core values:

* Service Excellence and Professionalism
* Efficiency and Effectiveness
* Responsive and Results Oriented
* Values and Principles of Public Service,
* Integrity and Innovativeness
* Citizen-Centric
* Equity and Equality

### Mandate

Executive Order No. 2 of 2023 on the Organization of the National Government assigns the functions of the Ministry of Public Service, Performance and Delivery Management as follows:

1. Government Human Resource Information Systems and Services;
2. Internship and Volunteer Policy for Public Service;
3. Government Payroll Policy and Standards;
4. Government Shared Support Services;
5. Research, Development and Public Service Delivery Innovations;
6. Public Service Career Planning and Development;
7. Overseeing the Management of National Youth Service (NYS); and
8. Counselling Policy and Service.

## Organization chart of the organization

The State Department for Public Service and Human Capital Development operates under the Ministry of Public Service, Human Capital Development and Special Programmes. The department is structured hierarchically, starting from the Cabinet Secretary at the top, followed by the Principal Secretary, who provides strategic leadership and oversight to all directorates.

The department is composed of several directorates and divisions, each tasked with specific mandates to ensure the development and efficient management of the public service workforce. The key directorates include:

* Human Resource Policy
* Human Resource Development
* Management Consultancy Services
* Public Sector Reforms and Transformation
* Counselling and Wellness Services
* General Administration
* Human Resource Services
* Huduma Kenya Programme

Each directorate is subdivided into departments or units with defined responsibilities, all working in synergy to promote effective public service delivery.

## Description of the departments and their activities

Below is an outline of the major departments under the State Department for Public Service and Human Capital Development and their core functions:

1. Human Resource Policy Directorate

This directorate is responsible for formulating, reviewing, and interpreting policies related to human resource management in the public sector. It ensures uniformity and compliance with HR standards and legal frameworks across government agencies.

1. Human Resource Development Directorate

Focuses on capacity building of public servants through structured training programs, scholarships, and leadership development. It aims to cultivate a skilled, motivated, and future-ready public workforce.

1. Management Consultancy Services Directorate

Offers consultancy support to government entities on organizational restructuring, performance improvement, change management, and institutional strengthening to boost service delivery.

1. Public Sector Reforms and Transformation Directorate

Spearheads public service transformation through innovation, efficiency reforms, and performance management initiatives across Ministries, Departments, and Agencies.

1. Counselling and Wellness Services

Provides professional counselling, mental wellness support, and psychosocial interventions to public officers, promoting a healthy and productive workforce.

1. General Administration Division

Handles administrative functions including logistics, asset management, transport coordination, procurement, office maintenance, and facility management.

1. Human Resource Services

Manages personnel-related functions such as recruitment, appointments, promotions, retirements, and disciplinary procedures within the State Department.

1. Huduma Kenya Programme

A flagship initiative that coordinates and supervises the operations of Huduma Centres across the country, where citizens access multiple government services under one roof.

## Detailed description of the ICT department and its core activities/processes

During my industrial attachment, I was placed in the ICT Department of the State Department for Public Service and Human Capital Development, under the leadership of Mr. Bruno Makokha, the ICT Manager. The department plays a critical role in supporting the digital infrastructure and ensuring smooth operations across all other units in the organization.

The department comprises a collaborative team of ICT Officers including, Mrs. Githieya Beatrice, and Mrs. Njagi Elizabeth, who specialize in systems administration, network management, and technical support. The work environment was professional, team-oriented, and supportive, allowing for a productive learning experience.

#### **Core Activities of the ICT Department Include:**

1. **Administration and Oversight:** The ICT Manager oversees all ICT operations, ensuring strategic alignment of technology initiatives with departmental goals.
2. **System Administration:** Managing and maintaining internal systems to ensure reliable communication, data sharing, and operational continuity.
3. **Networking and Communication:** Configuration and troubleshooting of networks, maintaining primary and backup internet links, managing servers, and supporting IP phone and mail communication systems.
4. **Server Room and Hardware Management:** Regular maintenance and servicing of server rooms, switch rooms, and other ICT infrastructure.
5. **IT Technical Support:** Providing hardware and software support to internal and external users, addressing user issues promptly to maintain productivity.

This experience deepened my understanding of how ICT underpins government service delivery, while also enhancing my practical skills and teamwork abilities in a professional environment.

# CHAPTER TWO

# DUTIES AND RESPONSIBILITIES

## Networking

During my attachment period, I was extensively involved in networking activities that enhanced my understanding of both hardware and software aspects of network systems. I participated in troubleshooting network connectivity issues using command-line tools such as ipconfig, ping, and netsh. These tools enabled me to diagnose and resolve issues related to IP configuration, DNS resolution, and network adapter malfunctions.

I configured static IP addresses on local machines, which taught me the importance of stable IP assignments in environments where network resources like printers and shared drives are in use. I also learned how to clear the DNS cache using ipconfig /flushdns to resolve website loading issues and DNS-related problems.

Additionally, I was involved in TP-Link router setup and basic router troubleshooting. This included resetting routers, changing default login credentials, and configuring wireless network settings such as SSID and passwords. These tasks helped me appreciate the layered structure of network communication and the importance of secure network configuration.

I also participated in physical network maintenance, such as reconnecting Ethernet cables and testing connectivity using cable testers. These activities improved my hands-on experience in managing network infrastructure and understanding the physical layout of organizational networks.

## Hardware Installation and Maintenance

Hardware installation and maintenance formed a crucial part of my daily responsibilities. I was involved in assembling and upgrading various components of computer systems. Notably, I replaced traditional hard drives with Solid State Drives (SSDs) to boost system performance. This process involved opening the system unit, safely removing and inserting drives, and configuring the BIOS to boot from the new hardware.

I also assisted in resolving issues related to peripheral devices, particularly printers. Tasks included troubleshooting paper jams, resolving driver-related issues, and re-establishing USB and network connections. This taught me the importance of routine maintenance and proper installation procedures to avoid system downtimes.

Another important activity involved identifying and recording hardware serial numbers using the Command Prompt. These serial numbers were useful in asset management and inventory updates, ensuring accurate documentation of hardware assets.

During my visit to the server room, I observed the configuration of Smart UPS systems and understood their role in providing backup power and protecting systems from abrupt shutdowns. This exposure reinforced the importance of hardware reliability in organizational IT infrastructure.

## Software Installation and Maintenance

I was actively engaged in various software-related tasks. I carried out installations of Windows 10 and Windows 11 operating systems across several machines. This included formatting drives, creating partitions, and performing clean installations from bootable USB drives created using Rufus.

I also installed the Microsoft Office Suite and configured it for organizational use. During these installations, I learned the importance of software licensing and version compatibility with operating systems.

Additionally, I installed specialized software like IFMIS (Integrated Financial Management Information System), commonly used in government operations. I also activated operating systems and office software using approved tools and methods, expanding my understanding of digital product keys and software activation protocols.

A critical highlight was learning password recovery using system recovery techniques. I replaced Utilman.exe with cmd.exe through the Command Prompt in a bootable environment, allowing administrative password resets. This experience significantly enhanced my knowledge in system recovery and security.

I was also involved in the installation and updating of antivirus software, specifically Falcon XDR, and ran security scans to detect and remove potential threats. These practices emphasized the role of software maintenance in maintaining system integrity and organizational cybersecurity.

## System Troubleshooting and Optimization

A significant part of my role involved diagnosing and resolving system performance issues. I improved the speed of computers by clearing temporary files, managing startup programs using msconfig, and adjusting processor settings to optimize performance.

When graphical interfaces failed to load, I restored them using Task Manager by running explorer.exe or other essential processes. These real-time troubleshooting tasks boosted my ability to handle system downtimes independently and quickly restore normal operations.

I also resolved driver issues that arose during software installations and operating system upgrades. Missing drivers were identified and installed, ensuring that all hardware components functioned correctly.

## Data Management and Analysis

In addition to technical roles, I contributed to data management tasks using Google Sheets and Microsoft Excel. I maintained digital records for assets, software installations, and maintenance logs. These tasks emphasized the importance of organized and retrievable data in an ICT environment.

I also performed data analysis using Microsoft Excel. This involved the use of formulas, conditional formatting, and chart generation to represent data visually. These reports improved decision-making and data interpretation in the department.

## Creative Design and Communication

My attachment period also included creative assignments such as designing flyers, certificates, and logos using Microsoft Publisher and Canva. These projects required attention to detail and creative thinking, helping me develop skills beyond technical IT work.

Through these designs, I contributed to departmental events and internal communication efforts. It also gave me a broader perspective of the role ICT plays in supporting various functions within an organization, including branding and information dissemination.

## Administrative ICT Support

I supported administrative functions by performing online tasks such as filing KRA Nil and PAYE tax returns. These responsibilities helped me understand the integration of ICT in public service delivery.

I also handled documentation, assisted staff in resolving basic ICT issues, and learned how to manage shared drives and folders. These activities enhanced my interpersonal and problem-solving skills, enabling me to offer efficient user support.

## Teamwork and Personal Development

Throughout the attachment, I participated in team-building sessions such as those using the Johari Window model. These sessions improved my communication, self-awareness, and ability to collaborate with colleagues.

Engaging in activities that required group effort helped me develop teamwork skills that are essential in any ICT environment. I learned how to balance technical work with interpersonal relations, a critical aspect of workplace success.

# CHAPTER THREE

# LIMITATIONS, CONCLUSIONS AND RECOMMENDATIONS

## Limitations

During the industrial attachment period, I encountered a few challenges that affected the smooth flow of daily tasks:

* **Limited Access to Certain Systems**: Due to security policies in place, I was not granted full administrative access to some servers and core financial systems like IFMIS. This limited hands-on experience in certain areas.
* **Hardware Constraints**: Some machines used outdated hardware, which slowed down software installations and troubleshooting processes, requiring more time to complete tasks.
* **Time Constraints**: Due to the large number of users requesting support, especially during peak hours, it was sometimes challenging to offer in-depth assistance to every case.
* **Internet Instability**: Occasional network downtimes and slow internet speeds disrupted online tasks, including software downloads, updates, and KRA submissions.
* **Exposure to Limited Tools**: While I worked with many essential tools, exposure to advanced enterprise-level technologies (e.g., server virtualization, cloud-based management tools) was minimal due to organizational limitations.

## Conclusion

The industrial attachment period was a valuable and transformative experience that helped bridge the gap between theoretical knowledge and practical application. I gained hands-on skills in areas such as network configuration, hardware and software installation, data recovery, and cybersecurity practices. Working alongside professionals allowed me to understand workplace dynamics, build problem-solving skills, and improve my communication abilities.

Notably, I was able to contribute to real organizational operations, such as troubleshooting network issues, installing and configuring systems, participating in team-building activities, and even handling KRA tax return processes. These activities not only enhanced my technical abilities but also shaped my understanding of professionalism, time management, and accountability in the workplace.

## Recommendations

Based on my experience, I would like to suggest the following recommendations:

* **Increased exposure to advanced systems**: Future interns would benefit from structured access even in sandboxed environments) to enterprise tools like virtualization platforms, cloud-based IT management systems, and network monitoring tools.
* **Modernize equipment**: Upgrading outdated hardware would improve operational efficiency and enhance learning experiences.
* **Structured training sessions**: Weekly or bi-weekly training sessions could be introduced to help attaches’ grasp concepts and tools that are commonly used in the department.
* **Extend attachment duration**: Where possible, extending the duration of attachment would allow for deeper engagement with systems and allow attachés to participate in longer-term projects.

In conclusion, this attachment was an enriching learning journey that solidified my career path in Information Technology. The knowledge and skills acquired will be instrumental in my future academic and professional endeavors.

## REFERENCE

https://mps.go.ke/