INDUSTRIAL ATTACHMENT REPORT

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SCHOOL: AFRICA INTERNATIONAL UNIVERSITY

LEVEL OF STUDY: DEGREE

YEAR OF STUDY: 2021-2025

COURSE: BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

STATION: KENYA NATIONAL HIGHWAY AUTHORITY (KeNHA) KISUMU

REGIONAL OFFICE

DEPARTMENT: INFORMATION COMUNICATION TECHNOLOGY

ATTACHMENT PERIOD: 20/5/2024 – 26/7/2024 (2 MONTHS)

## Preliminaries

# Declaration

I, John Vernest, declare that all information in this document is my own work and has been carried out at Kenya National Highway Authority cooperate company. I declare that I have fully written this report based on truth and cited all activities and duties that I undertook while on attachment.

In addition, this material is original and is in accordance with academic rules and ethical conduct.

NAME……………………………………………………………………………. SIGN………………………………………………………………………………. DATE……………………………………………………………………………….

# 0.2 Dedication

I dedicate this report to my Parents, Pastor Philip and Dr. Rose Oyoo. For their unwavering support, prayers, motivations and love throughout my academic journey. Their guidance and belief in my potential have been my greatest source of encouragement. I thank them for always being there for me.

# 0.3 Acknowledgement

Firstly, I would like to express my deepest gratitude to God for life, good health and wisdom, that enabled me to set my goals, keep my dreams alive, and wake up every day with a hope in my heart.

I also acknowledge my supervisors Mr. Edwin Momanyi and Mr. Sheldon Ombasa, for their guidance, support and valuable feedback throughout the course of this project.

Finally, to my lectures, colleagues and friends who have been with me through this educational journey, I appreciate you so much for your positive impact that has been meaningful to me.

NAME………………………………………………….

SIGN………………………………….

DATE…………………………

# 0.4 Abstract

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his report documents the experience and insights gained during my industrial attachment at Kenya National Highway Authority. Over the course of my attachment, I was stationed at the regional office, where I engaged in various administrative and operational tasks. Despite the limited scope of activities compared to the headquarters, the attachment provided valuable exposure to the practical aspect of highway management and infrastructure development. The attachment involved variety of tasks undertaken in IT field which enhanced my understanding of the activities involved e.g. information security, support and maintainers. This experience offered a glimpse into the organization culture and operations of KeNHA which contributed to my academic and professional development.

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## CHAPTER ONE: INTRODUCTION

# 1.1 Background of the Organization

# 1.1.1 Description of the organization

KeNHA is a state corporation under the ministry of roads established by the Kenya Roads Acts 2007 with the core mandate of construction, maintaining and improving Kenya’s strategic road the road network. The road network plays a vital role in supporting everyday lives of individuals and communities, and is crucial to the success of the economy and achieving the vision 2030. KeNHA is responsible for the development and management of national truck roads (classes A, B and C) the authority is managed by a board of directors and administratively run by the director general as the overall coordinator of its functions and activities including being the accounting officer. The administration is organized around a number of key service areas including planning and environment, design and construction, maintenance, special projects, internal Audits, general administration, Legal and Corporate Affairs, Human Resource Development and Management, Quality Assurance, Procurement and Information Communication Technology (ICT). Headed by senior officers, the units provide support to all Departments

# 1.1.2 VISION

A Quality National Trunk Road Network to All for Prosperity.

# 1.1.3 MISSION

To develop and manage resilient, safe and adequate National Trunk Road for sustainable development through innovation and optimal utilization of resources.

# 1.1.4 Organization value

* Accountability
* Sustainability
* Innovation
* Teamwork

# 1.1.5 Organization’s Industry

Top management of KeNHA is committed to comply with national policies, directives, circulars, regulatory and statutory requirements and contractual obligations. We commit to review this policy at least once every three years.

Top management of KeNHA commits to provide the necessary resources towards the effective implementation and continual improvement of the Quality Management System that conforms to the requirement of ISO 9001:2015 Standard.

# 1.1.6 Reasons for choosing the organization

1. Exposure in an industrial environment
2. Obtain technical skills
3. Develop professional skills
4. Build connection with professionals for future job opportunities
5. Gain insights into the regulatory and policy frame works

# 1.2 Organization Structure

# 1.2.1Departments and their roles

1. **Maintenance**

Roles

* Preparation of annual work plan
* Tender requisition
* Supervision of work
* Preparation of tender documents
* Pre-tender site visit
* Organize for inspection and acceptance of completed work

1. **Survey section**

Roles

* Procurement of survey map, design and land acquisition drawing
* Geo-referencing and digitalize survey maps and drawing acquired
* Update GIS database
* Extension of road reserve data
* Mobilization of stakeholders
* Placement of market post
* Mapping of road reserve

1. **Supply chain Management**

Roles

* Procurement of goods and services for authority
* Expediting of internal approvals and documentation of procurement transaction
* Weekly status report and other management report

1. **Information Communication Technology**

Roles

* To maintain integrity and availability of data
* To ensure ICT user support request are resolved within 12 hours
* To ensure 100% compliance in maintenance of ICT equipment

1. **Finance**

Role

* To increase the implementation of approved regional budget for operation
* To ensure that departmental information receives pertinent level of protection required
* To reduce payment of sundry creditors

1. **Human Resource**

* Provide a safe and secure work environment
* To provide efficient transport service to the regional staffs
* To coordinate efficient records management

1. **Cooperate Communication Department**

Role

* Respond to customer complaints and resolve them
* Communicate the outcome of tendering process following award
* Acknowledgement and responding to request of information

1. **Axelrod Enforcement and Highway Unite (ALEHU)**

* They are responsible for law enforcement at KeNHA to attain its goals
* Road inspection
* Security during Surveys

# 1.2.2Organization Chart

KeNHA Headquarters

Board of directors

Director general

Directorate of policy strategy and compliance

Directorate of corporate services

Directorate of Highway Planning and design

Directorate of Audit services

Directorate of Road Asset and Corridor management

Directorate of development

Supply chain management department

Strategic and economic planning department

Highway safety and planning department

Trunk and regional network coordination

Finance and accounting department

ERM & BPR Department

Special Project department

Corporation Secretary/legal services department

Highway design department

National trunk maintenance (4 corridor)

HRM Department

Corporate communication department

Regional network maintenance (10 regions)

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ICT department

Structures department

Construction Department

Quality assurance department

Administration Department

Road asset management

Survey Department

PPP Department

Research and innovation department

Environmental and social safeguard department

KeNHA Regional Office

ASSISTANT DIRECTOR REGIONAL NETWORK MAINTENACE

SINIOR ASSISTANT OFFICE ADMINISTRATOR

SENIOR ACCOUNTANT

SUPPLIECHAIN MANAGEMENT OFFFICER

SENIOR SURVEYER

SENIOR EGINEER COUNTIES

SENOIR ENGINEER COUNTIES

ICT

COOPERATE COMMUNICATION

ROAD INSPECTOR SUPERINTENDED

SINIOR ASSISTANT OFFICE ADMINISTRATORTOR

ROAD INSPECTOR SUPERINTENDED

ASSISTANCE SCM MANAGER OFFICER

ASSISTANT SURVEYER

ASSISTANT ACCOUNT OFFICER

SINIOR DRIVER

OFFICE ASSISTANT

**KeNHA Corridor Structure**

# 1.2.3. Objectives of the Attachment

* Develop professional competencies, by taking responsibilities, participating in meetings and volunteer for tasks.

* Build a professional network with colleagues through engaging in meaningful conversation and seek mentorship.
* Understand regulatory and policy frameworks by reading relevant documents and policies and seek explanation from supervisors.
* Acquire technical skills and knowledge at outmost, by requesting my supervisor for a one-week workshop in the ICT department at the headquarters. This would be helpful to my career development.

# 

# CHAPTER TWO: OBSERVATIONS AND ACCOPMPLISHMENTS

# 2.1 The activities/work done during the entire period

The following is an outline of the main activities and duties I was assigned to in ICT Department during my attachment period.

1. Formatting and installing software

* Installing of operating system
* Installation of auto cad
* Installation of antivirus software (Kaspersky) and updating it
* Installing browsers (google chrome, Firefox)

1. Hardware

* Upgrading computers for examples replacing hard disc and adding RAM
* Setting up a computer in a new location
* Replacing faulty peril [heralds e.g. mouse, keyboard]
* Blowing of PC’s and printer and cleaning them
* Configuring Ethernet cables connections using cable tester

1. Client desk

* Providing support to user who have problems in network connection
* Helping users with printer connection problem
* Helping user to troubleshoot slow PC’s

1. Networking

* Identifying problems in the network e.g. loose cables
* Troubleshooting the problem of network cables
* Resolving user log in conflicts and IP address configure

# 2.2 Objectives achieved

* Develop professional competencies, by taking responsibilities, participating in meetings and volunteer for tasks.
* Build a professional network with colleagues through engaging in meaningful conversation and seek mentorship.
* Understand regulatory and policy frameworks by reading relevant documents and policies and seek explanation from supervisors.

# 2.3 Value of the attachment to my course

* Exposure in an industrial environment
* Obtain technical skills
* Develop professional skills
* Build connection with professionals for future job opportunities
* Gain insights into the regulatory and policy frame works

# 2.4 Learning opportunities offered

* W3schools and Udemy are website for learning how to code.
* Using command prompt and a variety prompt to be executed.
* Using CISCO packet tracer
* Using drives to connect printers and scanners

# 2.5 Experience gained and skills acquired

* Coding using various programming language
* Installing windows
* Troubleshooting PC
* Solving hardware problems for printers and PC
* Backing up data in cloud
* Operating server machine
* Operating landline telephone
* Connecting printers and scanners to PC and desktops

2.6 Main challenges/difficulties faced & how you overcame them.

* Limited learning opportunity by not being exposed to field work projects.

Solution: Expressing my interest in learning new skills.

* Adapting to the organization culture and expectations.

Solution: Observe and learn from colleagues.

# 2.7 Contributions the attachment has made to the organization

* Fresh perspectives from my academic learning
* Support for project and task
* Applying modern technical skills and knowledge at work
* Bringing enthusiasm, energy and positive attitude to work

# 2.8 Influence of the attachment on your future career choices and expectations

* Professional networking
* Mentorship
* Understanding workplace dynamic and culture
* Goal setting and future planning
* Skill development
* Increased confidence

Areas of improvements if you were to do another attachment

* Time management
* Communication skills
* Relationship building
* Utilization of feedbacks
* Critical thinking

## CHAPTER THREE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

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# SUMMARY

My attachment at Kenya National Highway Authority has been insightful. The job scope and duties assigned focused primarily on hardware, software and networking. The work was highly relevant to the field of study in ICT. During the period of attachment, valuable knowledge was gained through active participation and inquisitive learning. knowledge on how to handle hardware devices e.g. repair, cleaning and maintenance was acquired.it was a beneficial and educating experience.

# CONCLUSION

In conclusion, my attachment at the regional office has been a valuable and enriching experience. I have gained practical insights into the day to day operations and have developed a better understanding of the cooperate environment. I am grateful for the support and guidance from my colleagues and supervisors. I look forward to continuing my professional journey with the organization and contributing effectively to its success.

# RECOMMENDATION

I would like to recommend that I be given the opportunity to attend a workshop at the headquarters. This would allow me to gain a deeper understanding of the organization’s operation, interact with a wider range of professionals and acquire a wider range of skills that are crucial to my role.

# REFERENCE

Kenya Roads Act 2007

Kahn Manuals and publications

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### APENDICES

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DEPARTMENT** | **DATE** | **PROBLEM & SOLUTION** | **STATUS** | **DURATION**  **(Solved within)** |
| **MAINTENANCE** | **27.5.24** |  |  |  |
| **28.5.24** | **Dan**  **-Request for software installation**  **-Installation of Civil 3D and Windows installation** | **Solved** | **3hrs** |
| **29.5.24** | **Queen Verline**  **-No internet**  **-WAN unplugged on router** | **Solved** | **20min** |
| **30.5.24** | **-Request for assistance with scanning and joining team meetings.**  **-Requester duly assisted.** | **Solved** | **30min** |
| **31.5.24** | **-Request for assistance with Risk and opportunity register**  **-User duly assisted** | **Solved** | **1hr** |
| **FINANCE** | **27.5.24** | **Evans**  **-Lost printer connection**  **-Connection of printer to machine using IP** | **Solved** | **20 min** |
| **28.5.24** |  | **Solved** | **15 min** |
| **29.5.24** | **Evans Kipyegon**  **-Desktop disconnected from printer**  **-Installed the latest drives for the printer and changed printer status to “online”** | **Solved** | **30min** |
| **30.5.24** | **Peter**  **-Request for assistance printing report from ERP**  **-Exported the report to excel and printed to scale.** | **Solved** | **10 min** |
| **31.5.24** | **Antonina**  **-Excel sheet error**  **-Adjusted the adjacent column formula** | **Solved** | **15min** |
| **ADMIN/HR** | **27.5.24** | **Jared**  **-Requested assistance with Purchase Requisition** | **Solved** | **20min** |
| **28.5.24** | **-Request for assistance with user laptop performance**  **-Back up data, install windows 11 all necessary software.** | **Solved** | **2hrs** |