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## PROPOSAL FOR THE DEVELOPMENT AND IMPLEMENTATION OF CRIME MANAGEMENT SYSTEM ANALYSIS (CMSA)

Niru ai hakathon

### 1. INTRODUCTION

The Kenya continues to face increasing demands in crime prevention, investigation, data management, and strategic deployment of officers. These challenges require a centralized, secure, and data-driven digital solution to enhance efficiency, transparency, and informed decision-making.

This proposal introduces the **Crime Management System Analysis (CMSA)**—a centralized crime management portal designed to streamline crime data collection, analysis, reporting, and inter-station coordination across the Kenya Police Service.

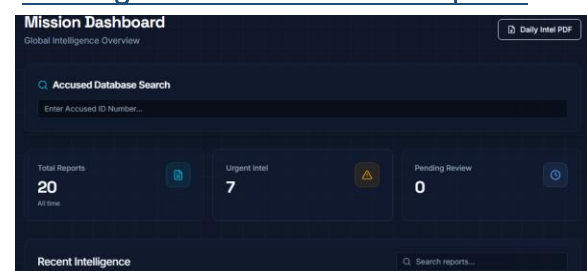
### Admin portal

The admin portal login interface features a dark blue background with a shield icon at the top. The title 'INTELNET' is prominently displayed in white, with the subtitle 'Secure Intelligence Reporting Portal' below it. Two buttons, 'Access Portal' and 'Request Access', are located at the top. The main section is titled 'Authorized Personnel Only' and prompts users to 'Enter your credentials to access the secure dashboard.' It includes input fields for 'Username' (with a placeholder 'Agent ID') and 'Password' (with masked characters '\*\*\*\*\*'). A blue 'Initialize Session' button with a right arrow is at the bottom.

### When you log in



### Showing statics of crime in admin portal



## Appearance of reported cases in admin

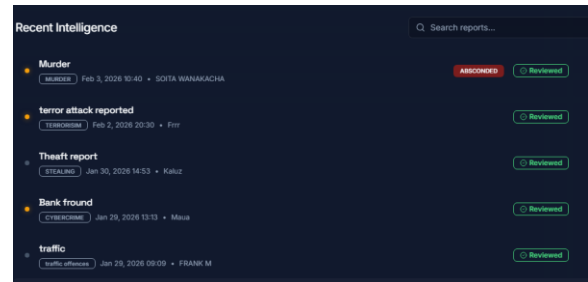
### 2. PROPOSED SYSTEM OVERVIEW

The **Crime Management System Analysis (CMSA)** is a secure web-based portal hosted at the **admin level** with controlled access from users interface and networks intelligence countrywide.

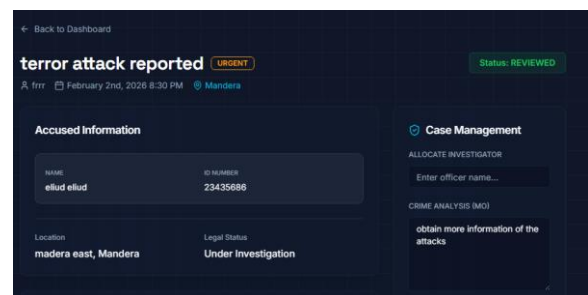
The system will implement **role-based user accounts**, ranging from:

- Sigle -level users
- Sub-county and county supervisors
- Regional command
- National administrators HQ

This ensures data integrity, accountability, and controlled access to sensitive information.



### Reports projection outlook



### Incident admin only can add investigator or comment

### 3. CORE SYSTEM FUNCTIONALITIES

#### 3.1 Crime Case Management

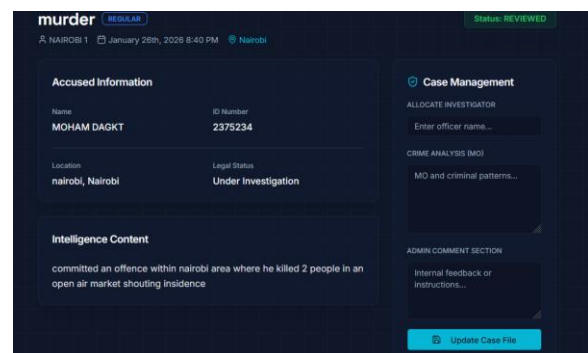
The CMSA will capture and manage:

- Cases under investigation
- Cases taken to court
- Completed cases
- Traffic offences

Each case record will include status updates, timelines, and responsible officers.

#### 3.2 Accused Persons Records Management

- Centralized database of accused persons
- Storage of identification details and offence history
- Ability to track repeat offenders across different police stations



A **search engine** will allow officers to input:

- National ID number
- Registration or reference number

to instantly check if an individual has **previous convictions or pending cases** in any station nationwide.

### 3.3 Wanted Persons Module

- A continuously updated list of wanted persons
- Visible across all authorized user portals
- Enhances ease of identification and tracking

## 4. CRIME DATA ANALYSIS AND REPORTING

The system will generate **automated crime reports**, including:

- Daily crime reports
- Crime distribution by offence type
- Trend analysis and statistical summaries

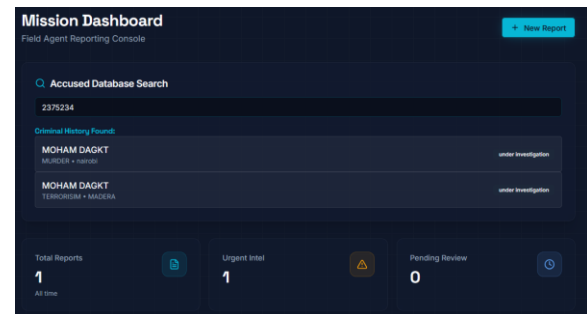
Reports will support data-driven decision-making and strategic planning.

## 5. GEOGRAPHICAL CRIME BREAKDOWN

CMSA will enable crime data analysis with breakdowns by:

- County
- Sub-county
- Police station
- Location
- Sub-location

**This is user interface from station where you can search person's previous conviction as shown below**



**This is crime figure filing page**

The screenshot shows a 'Submit Intelligence' form for filing a new report. It includes a 'Report Details' section with a 'Report Title' field (placeholder: 'Subject or incident name') and a 'Crime Category' dropdown menu (selected: 'GVC'). Below this is an 'Accused Persons' section with a 'Person #1' card containing fields for 'Full Name', 'ID Number', 'Photo (Portrait)', and 'Photo URL'. At the bottom, there are 'County' and 'Place of Offence' fields.

**This will show entering crime data per crime breakdown as shown below**

This screenshot shows the 'Submit Intelligence' form with the 'Crime Category' dropdown menu open. The menu lists various crime categories: GVC (selected), DEFFILMENT, TERRORISM, MURDER, MANSLAUGHTER, CYBERCRIME, ASSAULT, ROBBERY, BREAKINGS, and STEALING. The rest of the form structure is identical to the previous screenshot.

Each crime record will include **map references (geospatial tagging)** showing where the offence occurred, supporting:

- Crime hotspot identification
- Better deployment and patrol planning
- Preventive policing strategies

## 6. OPERATIONAL BENEFITS TO KENYA POLICE SERVICE

The CMSA will:

- Improve efficiency in crime data handling
- Enhance coordination between police stations
- Support intelligent deployment of officers
- Reduce duplication of records
- Strengthen crime prevention through predictive analysis
- Enhance accountability and transparency

## 7. SYSTEM SECURITY AND DATA PROTECTION

Given the sensitive nature of police data, the system will incorporate:

- Secure authentication and authorization
- Role-based access control
- Audit logs for user activities
- Data encryption and secure hosting at Police HQ Data Center

The system design aligns with modern cybersecurity and digital forensics principles.

**The figure below show crime breakdown according to place happened and attachment of any evidence or document as a pdf.**

The screenshot shows a web application interface. On the left, there is a 'County' dropdown menu with a list of counties: Busia, Siaya, Kisumu, Homa Bay, Migori (highlighted in blue), Kisii, Nyamira, and Nairobi (marked with a checkmark). To the right, there is a 'Place of Offence' section with a text input field and a 'Current Status' dropdown menu set to 'Under Investigation'. At the bottom, there is a section for 'Attached Evidence (PDF Only)' with an 'Attach PDF' button.

**The graph below showing breakdown of cases according to area they happened for easier understanding.**



## 8. CONCLUSION

The **Crime Management System Analysis (CMSA)** offers a scalable, secure, and data-driven solution that will significantly enhance crime management, analysis, and operational effectiveness within the Kenya security enhanced services.

I respectfully submit this proposal for consideration and possible pilot implementation.

**The figure below will be showing crime figure flowing through the day with which will be indicate the one which is most urgent.**

