

# **Smart Patrol Planner – Full Project Roadmap**

## **PHASE 1 — TECHNICAL ROADMAP**

Deadline: 30 January

Objective: Define the full Smart Patrol system.

Deliverables:

- Kenya-first system architecture
- Data flow & security design
- AI module definitions
- Ethics & DPA 2019 compliance plan Tasks (before 30 Jan)
- Finalize data sources (phones, citizen reports, maps)
- Draw architecture & data pipeline
- Define AI engines (risk scoring, routing, classification)
- Write ethics & bias mitigation framework
- Compile official roadmap document

## **PHASE 2 — DATA & DEVELOPMENT ENVIRONMENT**

Timeline: 30 Jan → 13 Feb (14 days)

Objective: Set up infrastructure and usable data.

Deliverables:

- GitHub repository (audit trail)
- Secure database with encryption
- Synthetic + sample incident data
- Ingestion APIs (reports, GPS, media)
- Data governance policy Tasks:
- Set up backend + database
- Configure encryption & access control

- Generate anonymized datasets
- Build data upload APIs
- Validate data quality & bias checks

## **PHASE 3 — FUNCTIONAL ALPHA**

Timeline: 13 Feb → 27 Feb (14 days)

Objective: Deliver a working Smart Patrol prototype.

Deliverables:

- Incident classification AI
- Risk scoring + hotspot heatmap
- Patrol route suggestions
- Officer/citizen input interface
- Human-in-the-loop approval screen Tasks:
  - Train event classification model
  - Build heatmap logic
  - Create route optimizer
  - Integrate dashboard + mobile UI
  - Conduct end-to-end test

## **PHASE 4 — SECURITY & INTEGRATION**

Timeline: 27 Feb → 13 Mar (14 days)

Objective: Make the system national-grade & compliant.

Deliverables:

- Role-based access control
- Encrypted logs
- Secure APIs

- Explainable AI module
- Bias & ethics audit report Tasks:
- Add authentication & user roles
- Secure API gateway
- Implement explanation layer
- Bias & fairness monitoring
- Final security testing

## **PHASE 5 — FINAL SELECTION Timeline:**

13 Mar → 20 Mar (7 days) Objective: Prepare winning submission.

Final Assets:

- Live demo (simulation + dashboard)
- Impact & sustainability metrics
- Ethics + security reports
- GitHub commit history
- Final pitch deck