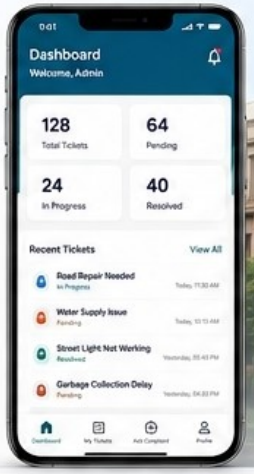
ZEROVAEGA TECHNOLOGIES

Business Case Study

Smart Grievance Management Mobile Application

Digitising grievance redressal for faster resolutions, greater transparency & accountable governance.



8 Core Modules

2 User Roles

100% Digital Workflow

Real-Time Dashboards

DOMAIN
e-Governance / Citizen Services

PLATFORM
Android (Mobile App)

PROJECT TYPE
Digital Grievance Management

01 EXECUTIVE SUMMARY

Zerovaega Technologies designed and delivered a Smart Grievance Management mobile application that digitises the end-to-end citizen grievance lifecycle for MPs, MLAs or any social leader, office administrators and field staff. Replacing manual, paper-based processes, the platform enables real-time complaint tracking, department-wise workflow assignment, GPS-enabled reporting and analytics-driven oversight — improving transparency, accountability and speed of resolution across constituencies.

BUSINESS CHALLENGE

- Manual, paper-based complaint registration and record-keeping
- No centralised visibility into complaint status across departments
- Inefficient, inconsistent assignment of grievances to departments
- Delayed communication between field staff and administrators
- Absence of real-time dashboards for pending / critical cases
- Limited accountability due to manual follow-up and no digital evidence

SOLUTION OVERVIEW

A single mobile ecosystem covering OTP-secured login, role-based dashboards, ticket workflows, notifications, search and centralised monitoring — built for two user groups:

MP / MLA / Super Administrators
— monitor performance, review dashboards, supervise resolution.

Office Staff / Field Workers
— register grievances, assign tickets, update status, follow up.

03 CORE CAPABILITIES

Secure Authentication
OTP/JWT login with role-based, session-secured access.

Administrative Dashboard
Live ticket, department & constituency-wise analytics.

Digital Grievance Registration
Citizen details, geo-location, photo/video evidence capture.

Ticket Management & Assignment
Auto-generated tickets, prioritisation, activity timeline.

Monitoring & Follow-Up
Status updates, remarks, resolution timeline tracking.

Search & Advanced Filtering
Filter by date, department, constituency, status, priority.

Notification Management
Real-time alerts for assignments, escalations, resolutions.

My Tickets
Personalised view of assigned, pending & completed tickets.

> By centralising registration, assignment and monitoring in one mobile ecosystem, the platform turns grievance redressal from a paper trail into a transparent, trackable and accountable digital workflow.

04 SOLUTION ARCHITECTURE & TECHNOLOGY STACK

A scalable three-tier architecture — a Flutter-based Android mobile app, Node.js backend services (auth, grievance, ticket-assignment, notification, reporting) and MySQL — supports secure, real-time grievance processing.

MOBILE APP



- Flutter (Android)
- OTP Login
- Ticket Management
- GPS & Camera
- Notifications

BACKEND SERVICES

- Node.js / REST APIs
- Auth & User Service
- Grievance Service
- Ticket Assignment
- Notification Service
- Reporting & Analytics

DATABASE

- MySQL

TECHNOLOGY STACK

Flutter (Android)	Node.js REST APIs	MySQL Database	Firebase Cloud Messaging Notifications	Google Maps API Maps & Location	JWT / OTP Authentication	Cloud Storage File Management

05 IMPACT POTENTIAL

TRADITIONAL PROCESS		SMART GRIEVANCE PLATFORM
Manual complaint registration	→	Digital grievance submission
Paper-based, siloed records	→	Centralised digital records
Limited, delayed tracking	→	Real-time ticket tracking
Manual, ad-hoc assignment	→	Automated department routing
Limited reporting & oversight	→	Live dashboards & analytics

06 RESULTS & BUSINESS IMPACT

- Faster grievance registration and processing
- Real-time visibility across administrative levels
- Stronger coordination between field staff and departments
- Reduced dependency on paper-based workflows
- Greater accountability via structured ticket assignment
- Improved citizen service delivery through timely follow-ups

07 SECURITY & COMPLIANCE

- JWT session management & role-based access control
- Encrypted, secure REST API communication
- Secure file upload management for attachments
- Activity logging & audit trail for complaint actions
- Continuous user session validation

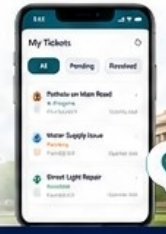
08 KEY FEATURES

Role-Based Access · **GPS Location Capture** · **Image & Video Attachments** · **Automated Ticket Routing**

Push Notifications · **Advanced Search & Filters** · **Constituency-Wise Reports** · **Performance Analytics**

09 CONCLUSION

The Smart Grievance Management Mobile Application marks a significant step toward digital governance — unifying grievance registration, workflow-based assignment, real-time dashboards and notification-driven communication on a secure, mobile-first platform. Zerovaega Technologies delivered a scalable enterprise mobility solution that equips government representatives and administrative staff with faster resolutions, data-driven decisions, and an enhanced citizen experience.



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