Product Requirements Document: SudhaarNow - Civic Issue Platform

Document Information

Field	Value
Product Name	SudhaarNow - Civic Issue Platform
Document Owner	Ganesh, Arief, Suhaib
Stakeholders	Citizens, Local Government Authorities, Platform Administrators, Product Team
Last Updated	October 25, 2025
Status	Completed
Version	1.0
Document Type	New Platform

Executive Summary

Field	Value
Problem	Citizens lack a transparent, efficient, and engaging platform to report, track, and receive updates on local civic issues (e.g., potholes, garbage, streetlight failures). This leads to fragmentation, lack of accountability, and delayed resolution.
Solution	A gamified web and mobile application that connects citizens and authorities. It enables easy issue reporting with photo/location evidence, provides a transparent tracking system, and uses a points/badges system to incentivize civic participation.
Impact	Significantly increase citizen engagement, drastically improve the speed and transparency of issue resolution, enhance local government accountability, and foster a sense of community ownership over public infrastructure.
Investment	Full-stack development (web/mobile frontend, secure backend with API for maps, notifications, and gamification logic), database with geospatial capabilities, and an administrative dashboard.

Problem Statement

Current State Analysis

Currently, the process for reporting civic issues is inefficient and opaque. Citizens often resort to manual methods like calling hotlines, sending emails, or using outdated municipal websites. This fragmented approach results in lost complaints, a lack of standardized data, and zero transparency for the reporting citizen.

Key Pain Points:

Lack of Transparency: Citizens cannot track the status of their reports, leading to frustration and distrust.
Inefficient Reporting: Reporting is cumbersome, often lacking precise location data or visual evidence, which complicates the resolution process for authorities.
Low Engagement: There is no incentive for citizens to report issues, leading to under-reporting and delayed maintenance.
Authority Overload: Authorities lack a centralized, prioritized, and data-rich dashboard to manage the influx of complaints effectively.
Root Cause Analysis
The core problem is the absence of a unified, digital platform that provides a direct, transparent, and rewarding channel for civic communication. The lack of gamification and a real-time feedback loop fails to convert passive citizens into active community participants.
Cost of Inaction
Continued citizen frustration, degradation of public infrastructure due to delayed and unmanaged repairs, decreased public trust in local governance, and a missed opportunity to leverage citizen data for proactive urban planning.

Goals and Success Metrics

Primary Objective
To establish SudhaarNow as the primary, most efficient, and most engaging platform for citizens to report and track civic issues, while simultaneously providing authorities with a powerful, data-driven management tool.

Guardrail Metrics

System Latency: Should remain below 500ms for all core API calls (submission, status update).
Data Security Incidents: Should not exceed 0 per quarter.
Fake Report Rate: Must remain below 5% of total submissions.
Guardrail Metrics
Primary Users: Engaged Citizens and Residents
Characteristics: Tech-savvy or willing to use a mobile app, concerned about their local environment, and motivated by the gamification system to see improvements and earn recognition.
Motivation: Desire for a clean, safe, and well-maintained neighborhood, and Satisfaction of being a recognized contributor.

Secondary Users: Local Government/Municipal Authorities (Admin Users)
Characteristics: Responsible for dispatching maintenance teams, tracking work orders, updating issue status, and reporting on resolution progress.
Relationship to Primary: They are the recipients and resolvers of the issues reported by the

Primary Users:
Tertiary Users: Platform Administrators
Characteristics: Responsible for system configuration, user/role management, issue category setup, and system-wide monitoring.

Success Metrics

Metric Name	Level	Current Value → Target Value	Timeline
Issue Resolution Rate	Primary KPI	0% → 80% of reported issues resolved within 14 days	6 Months
Active Monthly Users (Reporting)	Primary KPI	0 → 50,000	6 Months
Time to First Status Update	Secondary KPI	N/A → < 12 hours	3 Months
Average Points Earned per User	Secondary KPI	N/A → 50 points per month	6 Months
User Satisfaction Score (In-App)	Engagement	N/A → 4.5/5.0	6 Months
Badge Progression Rate	Engagement	N/A → 25% of users reach 'Active' tier	6 Months

Target Audience

Solution Overview

High-Level Approach

SudhaarNow will be a full-stack application with three primary interfaces: 1. Citizen App (Web/Mobile): For reporting, tracking, and gamification. 2. Authority Dashboard (Web): For issue management and resolution updates. 3. Administrator Panel (Web): For system configuration and user management.

Key Principles

Transparency: All issue statuses, resolution details, and public dashboards must be open and viewable (excluding sensitive user data).
Gamification: The platform must be intrinsically rewarding, using points, badges, and leaderboards to drive sustained engagement.
Simplicity: The issue reporting process must be fast, intuitive, and require minimal steps.
Accountability: Every reported issue must be assigned a unique ID and tracked through a defined lifecycle.

Solution Components

1. Citizen App (Web/Mobile): Reporting interface, personal issue tracking, public transparency wall, gamification profile, and notification center.
2. Authority Dashboard (Web): Complaint viewing, filtering, assignment, status updating, resolution photo upload, and performance tracking.
3. Administrator Panel (Web): User/role management, category configuration, authority assignment, and system-wide analytics.
4. Backend API & Services: Secure data storage, issue lifecycle management, Google Maps/Location integration, notification service, and the core Gamification Engine.

Detailed Requirements

Feature 1: Issue Reporting (Citizen)
Objective: Allow citizens to quickly and accurately report a civic issue with all necessary evidence. User Story: "As a citizen, I want to log a complaint with photos and a precise location so that the authorities can easily find and fix the issue."
Acceptance Criteria: Given the user is on the reporting screen, When they submit a form with all required fields (category, location, at least one photo), Then a unique Complaint ID is displayed, and the issue status is set to 'Pending'.

Feature 2: Issue Tracking and Notifications (Citizen)
Objective: Provide real-time transparency on the progress of reported issues and keep the user informed. User Story: "As a citizen, I want to view the current status of my reported complaints and receive a notification when the status changes so that I know they are being addressed."
An Authority updates acceptance Criteria: Given a complaint's status, When the user checks their dashboard or receives a notification, Then the new status is immediately and accurately reflected.

Feature 3: Authority Dashboard and Management
Objective: Enable authorities to efficiently manage, assign, and update the status of reported issues. User Story: "As an authority, I want to view all new complaints, filter them by type and location, and update their status so that I can manage the resolution workflow efficiently."
Acceptance Criteria: Given an Authority changes a complaint status to 'Resolved' and uploads a resolution photo, when the Authority saves the change, then the system records the resolution time, credits the reporter with +20 points, and triggers a 'Resolved' notification.

Feature 4: Public Transparency Wall
Objective: Build public trust and showcase the platform's effectiveness by making issue resolution transparent. User Story: "As a citizen, I want to see a public wall or map of recently resolved issues in my community so that I can see the system is working."
Acceptance Criteria: Given a complaint is marked 'Resolved', When a user views the public transparency wall, Then the resolved issue appears on the map/list within 1 minute, and the reporter's points are updated on the Leaderboard.

Feature 5: Gamification System
Objective: Motivate and sustain civic participation through a structured rewards and recognition system. User Story: "As a citizen, I want to earn points and badges for my contributions and see my ranking on a public leaderboard so that I feel recognized for helping my community."
Acceptance Criteria: Given a user's points cross the threshold for the 'Champion' badge, When the system processes the points update, Then the user's profile is updated to 'Champion', and they receive an achievement notification.

Feature 6: Administrator Panel
Objective: Provide platform administrators with tools to monitor and configure the system. User Story: "As an administrator, I want to manage user roles, configure issue categories, and monitor system health to ensure the platform runs smoothly."

Acceptance Criteria: Given a new type of issue (e.g., "Pest Control") is identified, When an Admin adds the category and assigns the relevant Authority, Then the new category is immediately available in the Citizen App reporting form.

User Experience

User Journey Map (Issue Reporting & Resolution)

Step	User Action	System Response	User Emotion	Gamification Impact
1. Initiation	Opens App/Website	Displays map and "Report Issue" button	Hopeful	None
2. Data Capture	Selects category, takes photo, pins location, adds description.	Previews data, validates location.	Focused	None
3. Submission	Taps "Submit Complaint"	Displays "Complaint Submitted" with unique ID.	Satisfied	**+10 Points** (Valid Report)
4. Authority Review	None (Waiting)	Authority views complaint, changes status to 'In Progress', sets ETA.	Anxious	None

5. Tracking	Receives 'In Progress' notification.	Send push/email notification.	Relieved	None
6. Resolution	Receives 'Resolved' notification.	Sends push/email notification, updates Leaderboard.	Happy/Trusting	**+20 Points** (Resolved Issue) & Potential Badge Upgrade
7. Recognition	Checks Gamification Profile & Leaderboard.	Displays new points, badge tier, and ranking.	Proud/Motivated	Sustained Engagement

Design Principles

Gamified Feedback: Use visual cues (e.g., progress bars, animated point accrual, badge icons) to make the gamification system feel rewarding and engaging.
Trust Indicators: Use clear, unambiguous status labels, timestamps, and resolution photos to build confidence in the system's transparency.

Technical Requirements

Architecture Overview

The platform follows a **modern full-stack architecture** designed for scalability, modularity, and maintainability.

Frontend:

- **Framework:** SvelteKit (using Svelte 5 syntax)
- **Styling:** Tailwind CSS 4+ for utility-first responsive design
- **UI Components:** Shadcn/UI for prebuilt accessible components
- **Notifications:** svelte-sonner for toast notifications
- **Maps Integration:** Google Maps JavaScript API for geolocation, map visualization, and pin-based issue reporting

Backend & Logic Layer:

- **Language:** TypeScript
- **Auth System:** Lucia Auth for secure, modular authentication and session management
- **ORM:** Drizzle ORM for type-safe database interaction
- **Database:** File-based SQLite (one per tenant/project) with local caching and fast lookup
- **API Design:** REST/GraphQL endpoints exposed through SvelteKit server routes
- **Gamification Engine:** Built into the backend using event-based logic for point/badge updates

Storage & Hosting:

- **File/Media Storage:** Vercel Blob for photo uploads and static assets
- **Hosting:** Deployed on Vercel with auto-scaling and CI/CD pipeline
- **Caching:** Local caching handled via SvelteKit and browser storage (no external Redis dependency for MVP)

Performance Targets:

- Complaint submission and status APIs must respond under **500ms**.
- The system should support **1,000+ concurrent users** without degradation.
- Geolocation rendering and issue map updates should occur within **2 seconds**.

Security Requirements:

- All API requests validated through Lucia sessions and CSRF-protected endpoints.
- File uploads validated for MIME type and sanitized before Vercel Blob storage.
- User data stored only in encrypted fields where applicable.

Implementation Plan

(Idea)
Phase 1: MVP (Minimum Viable Product)
Scope: Core Issue Reporting (Feature 1), Basic Authority Dashboard (Feature 3 - limited to status update and 'Fake/Spam' marking), and Basic Issue Tracking (Feature 2 - no chatbot). Core Gamification Logic (+10, -15 points) is implemented.
Success Criteria: 100 successful end-to-end complaint submissions and resolutions by Authority users, and successful point accrual for reporters.

Phase 2: Enhancements and Public Launch
Scope: Full Authority Dashboard, Public Transparency Wall (Feature 4), Notifications (Feature 2.4), and Full Gamification System (Feature 5 - including +20 points, Badge Tiers, and Leaderboard).
Success Criteria: Achieve Level 2 Success Metrics (Time to First Status Update < 12 hours) and 10,000 active monthly users.

Phase 3: Future Iterations
Scope: Chatbot integration (Feature 2.3), advanced analytics for authorities, and integration with municipal work order systems.

Dependencies

Google Maps API: For location selection, display, and geocoding.
Cloud Storage (e.g., AWS S3): For secure and scalable storage of photo uploads.
Notification Service (e.g., Firebase Cloud Messaging/SendGrid): For push and email notifications on status updates.

Performance Requirements

Response Time: Complaint submission API call must complete in under 500ms.
Scalability: Must be able to handle 1,000 concurrent citizen submissions without degradation.
Gamification Engine: Point/badge updates must be processed asynchronously to avoid blocking core issue management workflows.

Go-to-Market Strategy

(Idea)
Launch Strategy
A phased rollout, starting with a pilot program in one neighborhood/district, followed by a city-wide launch once the Phase 2 Success Criteria are met.
Communication Plan
External: Partner with the local municipality to develop a press release and public service announcement campaign, focusing on the gamification and transparency aspects, to drive initial adoption.
Internal (Authorities): Dedicated training and support for Authority users on the new dashboard and workflow.

Core Requirements Met

This section confirms that the core, non-negotiable requirements outlined in the initial project brief have been fully addressed in the detailed requirements (Features 1-6).

Pending Features

These features were identified as "can have" or are planned for later phases (Phase 3) of the project and are not included in the initial MVP/Phase 2 scope. They represent the future roadmap for the platform.