

**STUDENT STARTUP & INNPOVATION POLICY 2.0 (SSIP 2.0)**

**Proposal Format for Proof of Concepts (PoCs)/Innovation/Idea/Projects/IPR supports**

1. **Name of Innovator: Patel Dhruv Vishnubhai**
2. **Name of Team:**
3. **Team ID:**
4. **Title of Innovation/Project/Prototype :** **CleanSociety**
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29. **Type of Innovation:** Service Innovation
30. **Field of Innovation**: 1. Garbage Collection Complain

2. Real-Time Tracking

3. Efficient Pickup Scheduling

4. Feedback Mechanisms

5. Collaboration with Local Authorities

6. Resource Allocation

7. Awareness Campaigns

8. Reduction of Landfill Waste

1. **Abstract of Problem you are solving/Proposed Idea/Innovation**: The CleanSociety project introduces a mobile application that allows users to easily Register garbage collection Complain to their municipal office. Upon receiving a Complain, the municipal office commits to clearing the reported garbage as soon as possible. This innovative solution enhances waste management efficiency, promotes community engagement, and encourages responsible waste disposal practices. By leveraging technology for real-time tracking and automated scheduling, CleanSociety aims to create cleaner urban environments and improve the overall quality of life for residents.
2. **Aim and objective:** The aim is to enhance urban cleanliness by enabling users to register garbage collection complaints directly to the municipal office. The platform ensures that all registered complaints are reviewed and acted upon, with the municipality committed to clearing the reported garbage as soon as possible. This initiative seeks to promote cleanliness, enhance public health, and foster better communication between citizens and local authorities.
3. **Motivation and genesis:** The CleanSociety project was born out of the urgent need to address the growing challenges of urban waste management and environmental sustainability. As cities expand, the volume of waste generated increases, leading to overflowing bins, unsightly litter, and public health concerns. Traditional waste collection methods often lack efficiency and responsiveness, leaving residents frustrated and communities polluted.

Motivated by the desire to create cleaner, healthier urban spaces, This Project leverages technology to empower citizens. The project enables users to register garbage collection complainnts directly to their municipal office through a user-friendly mobile application. By committing to clear reported garbage as soon as possible, municipalities can enhance service efficiency and accountability.

The genesis of CleanSociety lies in the belief that community involvement is crucial for effective waste management. By providing residents with a simple tool to report waste issues, the project fosters a sense of responsibility and encourages proactive participation in maintaining a clean environment. Ultimately, CleanSociety aims to transform urban waste management into a collaborative effort, improving the quality of life for all residents.

1. **Current status and open questions:**

**Current status:**

CleanSociety is made to allowing users to easily register garbage collection complaints to their municipal office. Upon receiving a complain, the municipal office commits to clearing the reported garbage as soon as possible. As per current status and requirement CleanSociety is helpful and workable for Local Authorities and Citizens. Our web-application gives users best UI and UX experience and easy to use and understand so that the users of our web- application can enjoy to explore our website and application.

**Open questions:**

How will user data be secured, and what privacy measures will be implemented in the web application?

What features should be included in the web application to ensure a user-friendly experience for residents register garbage collection complain?

How can the web application be integrated with existing municipal waste management systems for efficient processing of complaints?

What feedback mechanisms will be established within the web application to gather user input and improve the service?

How can municipalities effectively allocate resources to respond to garbage collection complain made through the web application?

1. **Plan of work including proposed methodology:**

**1. Project Planning (Week 1-2)**

**Objective:** Establish project scope, requirements, and success criteria.  
**Activities:**

* Conduct stakeholder meetings with municipal offices and user groups.
* Define functional and non-functional requirements.
* Create project milestones and timeline.
* Identify required technologies and development tools.

**Deliverables:**

* Project requirement document
* High-level project timeline

**2. Requirement Analysis and System Design (Week 3-4)**

**Objective:** Design the architecture and user interfaces of the CleanSociety system.  
**Activities:**

* Create wireframes for user and admin dashboards.
* Design the system architecture (database schema, server-client structure).
* Identify roles and access levels (user, municipal office admin, system admin).
* Plan data flow and garbage complain lifecycle.

**Deliverables:**

* Wireframes and UI mockups
* System architecture diagram
* Database schema design

**3. Development Phase (Week 5-12)**

**Objective:** Develop core features and backend functionalities.

**Frontend Development:**

* Build user and admin dashboards with a responsive design.
* Develop forms for garbage collection applications.

**Backend Development:**

* Implement complain submission and management APIs.
* Integrate secure login and authentication system.
* Create a database for storing garbage collection complain and user data.

**Notifications and Status Updates:**

* Develop notification services for status updates (email or SMS).

**Testing:**

* Conduct unit testing for individual modules.

**Deliverables:**

* Fully functional platform with core features
* Codebase with proper documentation

**4. Testing and Quality Assurance (Week 13-15)**

**Objective:** Ensure system functionality, performance, and usability.  
**Activities:**

* Perform integration and system testing.
* Conduct security testing and bug fixes.
* Gather feedback from pilot users (municipal staff and select residents).
* Optimize the user interface for better experience.

**Deliverables:**

* Bug-free and optimized system
* Usability test report

**5. Deployment (Week 16)**

**Objective:** Launch the CleanSociety platform for public use.  
**Activities:**

* Deploy on cloud hosting platform (AWS, Azure, etc.).
* Configure domain and SSL.
* Set up monitoring and analytics.
* Train municipal staff for platform usage.

**Deliverables:**

* Live and operational platform

**6. Maintenance and Updates (Ongoing)**

**Objective:** Ensure long-term platform performance and feature updates.  
**Activities:**

* Provide technical support.
* Monitor system usage and performance.
* Gather user feedback for continuous improvement.
* Roll out new features based on user requirements.

**Proposed Methodology**

* **Agile Development:** Implement iterative development with bi-weekly sprints for regular updates and testing.
* **User-Centered Design:** Gather user feedback continuously for platform improvements.
* **Data-Driven Insights:** Use analytics to optimize garbage complain handling and improve system efficiency.
* **Secure Development Practices:** Ensure data protection and secure communication between users and municipal offices.

1. **Milestones and time frame:**
   1. **Project Planning (Week 1-2)**
      * Milestone: Completion of project scope and requirement documentation.
      * Timeframe: End of Week 2
   2. **Requirement Analysis and System Design (Week 3-4)**
   * Milestone: Completion of system design and architecture documentation.
     + Timeframe: End of Week 4
   1. **Development Phase (Week 5-12)**
      * Milestone: Completion of core feature development and initial testing.
      * Timeframe: End of Week 12
   2. **Testing and Quality Assurance (Week 13-15)**
      * Milestone: Completion of testing and quality assurance with user feedback.
      * Timeframe: End of Week 15
   3. **Deployment (Week 16)**
      * Milestone: Successful deployment and platform launch.
      * Timeframe: End of Week 16
   4. **Maintenance and Updates (Ongoing)**
      * Milestone: Continuous platform improvement and feature updates.
      * Timeframe: Ongoing
2. **Benchmark and specifications of the product/process/service:**
3. **Complain Registration Time**: Max 3 minutes for users.
4. **Response Time**: Municipal office acknowledges within 12 hours.
5. **Collection Completion**: Within 48 hours of complain registration.
6. **User Satisfaction**: Target 90% satisfaction rate.
7. **System Uptime**: 99.9% uptime, low latency (under 2 seconds per complain).
8. **Security**: Data encryption and multi-factor authentication.
9. **Technology Stack**: Frontend: HTML/CSS/JavaScript ; Backend: PHP ; Database: MySQL/PostgreSQL.
10. **Mobile Compatibility**: Responsive design for mobile access.
11. **Deliverables and beneficiary industry/sector/society:**

**Deliverables:**

1. Web Platform: For users to register garbage collection complaints and for municipalities to track and manage them.
2. Mobile App: Optional app for submitting and tracking complaints on the go.
3. API Integration: For seamless connection with municipal systems.
4. Analytics Dashboard: For municipalities to monitor and optimize waste collection.
5. Training Materials: For users and municipal staff.
6. Public Awareness Campaign: Educating citizens about the platform.

**Beneficiary Sectors:**

1. Municipal Waste Management: Streamlined garbage collection process.
2. Environmental Sector: Cleaner urban environments.
3. Local Government: Improved service delivery and transparency.
4. Technology Sector: Growth in software and data analytics tools.
5. Citizens & Communities: Better waste management and cleaner public spaces.
6. Public Health: Reduced health risks from unmanaged waste.
7. **Unique Selling Proposition (USP):** CleanSociety revolutionizes urban waste management by providing a seamless, user-friendly platform for citizens to register garbage collection complaints directly to municipal offices. By reducing response times and enhancing communication between citizens and local authorities, CleanSociety ensures timely waste clearance, fosters cleaner environments, and promotes greater transparency and accountability in municipal services. This innovative solution makes waste management more efficient, effective, and responsive, improving the quality of life for communities while contributing to a cleaner, healthier society. it enhances urban cleanliness, reduces response times, and improves overall public health, making waste management more responsive, accountable, and sustainable.
8. **Industry, Institution or Agency partners:**
9. **Municipal Government Agencies**: Local waste management and public health departments to handle the garbage collection process.
10. **Technology Providers**: Software development companies or tech partners for building and maintaining the web and mobile platforms, API integrations, and analytics dashboards.
11. **Waste Management Companies**: Private companies that manage waste collection, disposal, and recycling, supporting logistics and operational efficiency.
12. **Environmental NGOs and Institutions**: Partnering with organizations focused on sustainability and clean environments for advocacy and awareness campaigns.
13. **Academic Institutions**: Collaboration for research and innovation in waste management practices, data analytics, and smart city solutions.
14. **Public Health Organizations**:To monitor the impact of improved waste collection on public health and advocate for better waste management practices.
15. **Tentative budget with year and item wise breakup with justification**:

**Tentative Budget with Year and Item-wise Breakup**

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Description | Estimated Cost (INR) | Justification |
| Platform Development | Development of the web and mobile platforms, including design, coding, and testing. | ₹10,000 | To build a scalable and responsive platform for submitting and managing garbage collection complaints. |
| API Integration | Integration with municipal waste management systems to ensure seamless data transfer. | ₹9,500 | Ensures smooth communication and data synchronization between the web platform and municipal offices. |
| Mobile App Development | Creation of mobile applications for users to register complaints and track updates on-the-go. | ₹10,000 | To make the service accessible to users through mobile devices for easy and fast complain registration. |
| Hosting & Server Maintenance | Cloud hosting, server management, and security to maintain uptime and data safety. | ₹5,500 | Essential for providing reliable service, ensuring data storage, security, and platform accessibility. |
| Marketing & Awareness Campaign | Public campaigns, including digital ads, print media, and local outreach programs to increase platform use. | ₹9,000 | To create awareness and educate citizens about the platform, encouraging adoption and engagement. |
| Training & Support | Training programs for municipal staff and end-users on using the platform, plus ongoing technical support. | ₹5,000 | Ensures smooth operation and minimizes issues by educating users and municipal staff about the system. |
| Monitoring & Evaluation | Regular assessments, performance reviews, user feedback collection, and improvement tracking. | ₹7,000 | To ensure continuous improvement, address challenges, and monitor system effectiveness. |
| Miscellaneous Expenses | Unforeseen expenses related to the project, such as unforeseen technical issues or additional resources. | ₹4,000 | Provides flexibility to address any unexpected costs that arise during the project development phase. |

**Total Estimated Cost (INR): ₹60,000**

1. **Annexure: (figures/diagrams/charts):**

**1. System Architecture Diagram**

* **Purpose**: To visually depict the interaction between users, the CleanSociety platform, and municipal offices.
* **Key Elements**: User -> Platform -> Municipal Office (Complain Processing) -> Feedback Loop (User Notification).

**2. User Journey Diagram**

* **Purpose**: To show the step-by-step process a user follows to register and track garbage collection complaints.
* **Steps**: Login -> Register Complain -> Status Tracking -> Notification.

**3. Gantt Chart (Project Timeline)**

* **Purpose**: To outline the key project milestones and timeline over three years, including platform development, marketing, and testing.

**4. Budget Breakdown Pie Chart**

* **Purpose**: To visually display the distribution of the project budget across development, marketing, training, and other expenses.

**5. Impact of CleanSociety on Garbage Collection Times (Bar Chart)**

* **Purpose**: To illustrate how response times for garbage collection are reduced with the platform’s implementation.

**6. Stakeholder Map**

* **Purpose**: To identify and show the relationships among key stakeholders, including citizens, municipal offices, and waste management companies.