

Functional Requirement Specification (FRS)

1. Introduction

Project Overview

The **Outdoor Media Management System** is designed for **Chhattisgarh Samvad** to provide a comprehensive digital solution for monitoring, auditing, and managing outdoor advertising campaigns. This system ensures transparency, efficiency, and compliance by digitizing the execution, verification, and reporting of government publicity campaigns. The platform will support various outdoor media assets, including:

- **Hoardings**
- **Unipoles**
- **LED Screen Walls**
- **Digital TVs**
- **Digital Wall Printing**
- **Backlit Advertisements**
- **Other Outdoor Media Assets**

By leveraging advanced **geo-tagging, real-time monitoring, automated reporting, and seamless integration** with the **in-house RO application**, the system ensures campaign compliance, reduces manual errors, and enhances accountability.

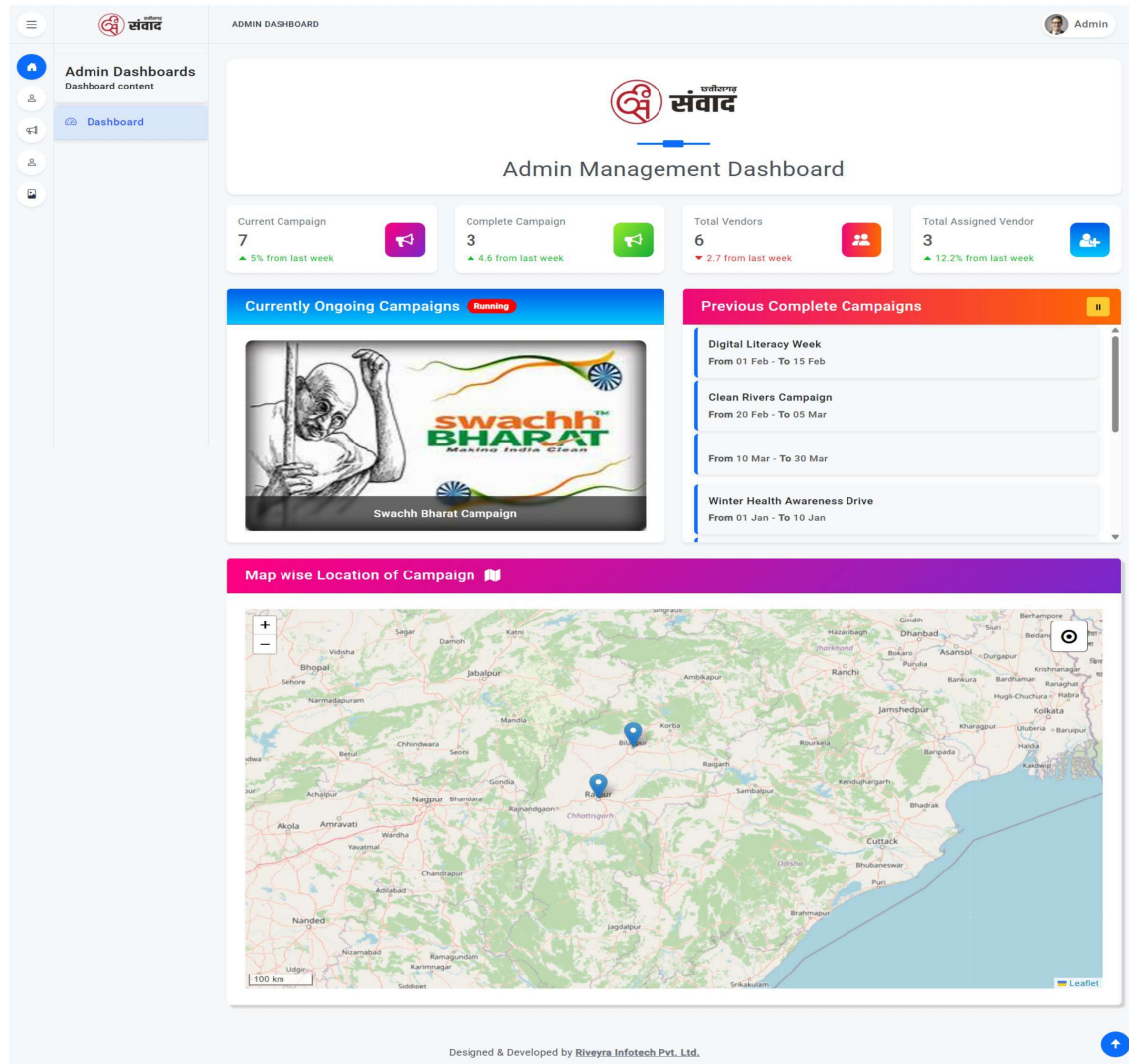
Purpose and Scope

The primary objectives of the system are to:

- **Enable real-time tracking** and management of outdoor advertising campaigns.
 - **Provide secure role-based access** to multiple stakeholders, including **Admins, Vendors, and Field Workers**.
 - **Ensure tamper-proof media uploads** with **timestamped and geo-tagged photos/videos** through a **native Android mobile app**.
 - **Automate report generation** in **Excel and PDF formats** to facilitate campaign monitoring, auditing, and compliance.
 - **Deliver real-time notifications** regarding campaign updates, status changes, and issue alerts.
-
- **Integrate seamlessly** with the **in-house RO application** to validate campaign execution, ensure accurate billing, and maintain compliance with government regulations.
 - **Support a scalable, cloud-based architecture** capable of handling increasing data loads and concurrent users efficiently.
 - **Implement stringent security measures** including **data encryption, access control, and privacy compliance** with standards such as **GDPR, CCPA, and the Indian IT Act**.

2. User Roles & Functionalities

Admin Dashboard



The **Admin** is the central authority responsible for overseeing the entire system's functionality, ensuring compliance, and managing user roles. The key functionalities include:

- **Vendor Management:** Admin can categorize vendors into different categories and subcategories. Admin can create new vendors and assign them to specific categories and subcategories. Admin can view vendor details, including their profile information and performance metrics. Admin can update vendor data, including their contact information, categories, and subcategories. Admin can disable vendors to prevent them from participating in future projects or receiving new orders.

Vendor Categories, Sub Categories Mange

सवादा

ADMIN DASHBOARD

Admin

Vendor Management

Manage and organize vendor details

Create Categories

Create Vendor

Manage Vendor

Create Category

Back

Create Category:

Enter Category Name

Create

Create Sub-Category

Select Category:

--Select Category--

Create Sub-Category:

Enter Sub-Category Name

Create

Category and Sub-category List

S.No.	Category	Sub Category
1	Fixed Structure	Hoardings
2	Fixed Structure	Unipoles
3	Fixed Structure	LED Screen Wall
4	Movable Structure	Digital TV
5	Movable Structure	Digital Wall
6	Movable Structure	Wall Printing
7	Movable Structure	Backlight

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Vendor Creation

संवाद

ADMIN DASHBOARD

Admin

Vendor Management

Manage and organize vendor details

Create Categories

Create Vendor

Manage Vendor

Add New Vendor

Back

Select Categories:

☐ Select All Categories

☐ Fixed Structure ☐ Movable Structure

Select Sub-Categories:

Choose Sub Categories

Vendor Name:

Enter Vendor Name

Email Address:

Email Address

Contact:

Phone No

Contact Person:

Contact Person Name

Contact Person Number

+

State:

Select State

City:

Select City

Password:

Enter Password

Confirm Password:

Confirm Password

Create

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Vendor Management

संवाद

ADMIN DASHBOARD

Admin

Vendor Management
Manage and organize vendor details

Create Categories

Vendor Management

Create Vendor

Manage Vendor

Vendor List

Back

Sr. No.	Name	Mobile Number	Password	City	Status	Actions
1	Test	1234567890	12345	Raipur	<input checked="" type="checkbox"/>	<div><div></div><div></div></div>

Vendor Details View

संवाद

ADMIN DASHBOARD

Admin

Vendor Profile

Vendor1

Raipur, Chhattisgarh, India

Contact Details

Email	test@gmail.com
Mobile No.	1234567890
City	Raipur
State	Chhattisgarh

Contact Person Details

Contact Person Name	Contact Number
PersonA	9090909090
PersonB	9090909099

- **Campaign Management:** Admin can create new campaigns and assign them to specific categories and subcategories. Admin can categorize campaigns into different categories and subcategories. Admin can manage campaign images, including uploading, updating, and deleting images. Admin can manage the campaign journey, including tracking current and previous images. Admin can view campaign details, including images, categories, and subcategories.

Campaign Creation

संवाद

ADMIN DASHBOARD

Admin

Campaign Management

Create and manage campaigns

Create Campaign

Manage Campaign

Create New Campaign

Back

Select Category

-Select Here-

Select Sub-Category

-Select Here-

Campaign Name

Campaign Name

Upload Image Design

Choose File

No file chosen

Add

Upload Pdf Design

Choose File

No file chosen

Add

Description

B I U

≡ ≡

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Description...

Start Date

mm/dd/yyyy

📅

End Date

mm/dd/yyyy

📅

Create

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- **Assign Management:** Admin can assign campaigns to vendors using various selective filter options, including:
 - Categories: Assign campaigns based on categories,
 - Subcategories: Further filter campaigns by subcategories related to the chosen category.
 - Geographic Filters: Assign campaigns based on geographic locations, including:
 - State: Filter by state or province.
 - City: Filter by city or municipality.
 - District: Filter by district or region.
 - Block: Filter by block or local area.
 - Gram: Filter by gram or village.

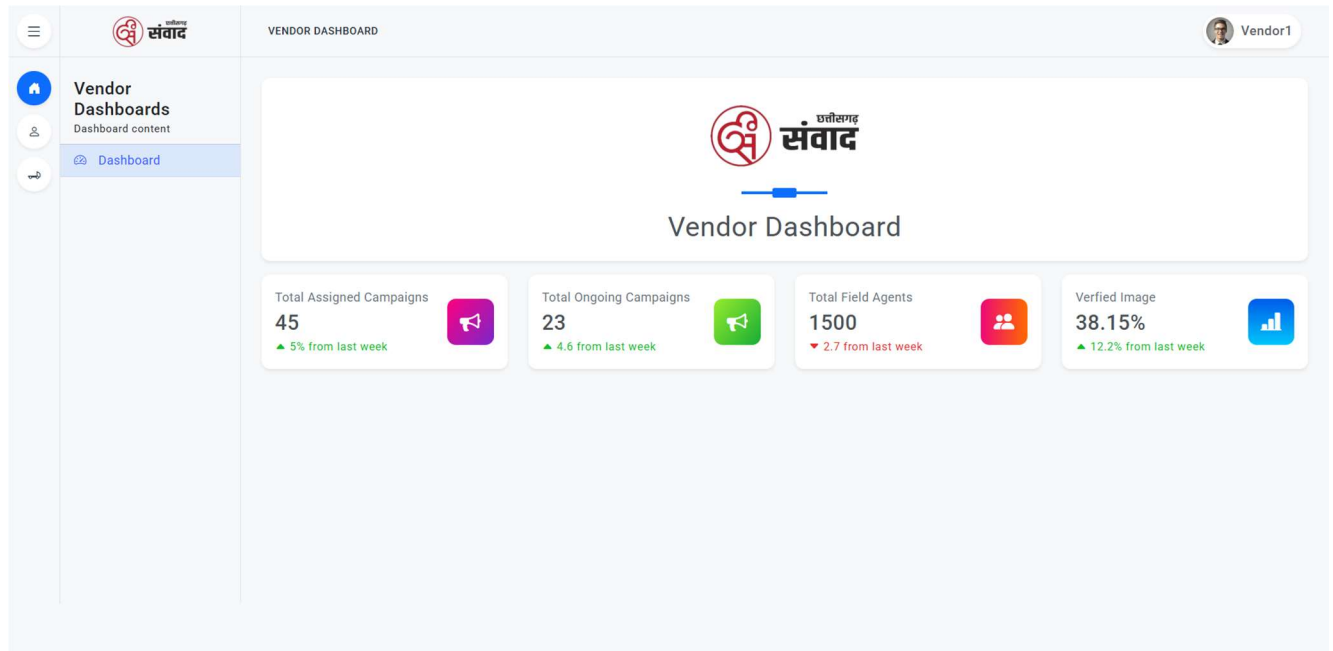
Assign Campaign

The screenshot displays the 'Assign Campaign' page within an 'ADMIN DASHBOARD'. The page features a sidebar on the left with navigation icons and a main content area. The main content area contains a form titled 'Assign Campaign Filter' with the following elements:

- Select Category:** A dropdown menu with '--Select Here--' as the placeholder.
- Select Sub Category:** A dropdown menu with '--Select Here--' as the placeholder.
- Select State:** A dropdown menu with '--Select Here--' as the placeholder.
- District:** A dropdown menu with '--Select Here--' as the placeholder.
- Block:** A dropdown menu with '--Select Here--' as the placeholder.
- Gram:** A dropdown menu with '--Select Here--' as the placeholder.
- ☐ Select All Vendors
- Assign by filter** button
- Back** button

- **Campaign History:** Admins can monitor campaign history, view campaigns, and verify images with real-time and date tracking using various tools and platforms.

Vendor Dashboard



Vendors are responsible for executing outdoor media campaigns and ensuring their compliance with the assigned guidelines. Their key functionalities include:

- **Vendor Field Agent Management**

Features:

1. **Field Agent Creation:** Vendors can create and manage field agents, assigning them to specific tasks and locations.
2. **Field Agent Management:** Vendors can view, edit, and delete field agent profiles, including their contact information and assignment details.
3. **Photo Upload:** Field agents can upload photos from the field, which can be viewed and managed by vendors.
4. **Real-time Updates:** Vendors can receive real-time updates from field agents, including photos and status reports.

- **Vendor Photo Approval Workflow**

Features:

1. **Photo Submission:** Field agents submit photos to vendors for review and approval.
2. **Vendor Review:** Vendors review and verify the submitted photos for quality, accuracy, and relevance.
3. **Approval/Rejection:** Vendors approve or reject the photos, providing feedback to field agents.
4. **Admin Dashboard:** Admins can view approved photos.

Field Agent Creation

संवाद

VENDOR DASHBOARD

Vendor1

Field Agent Management

Manage and organize Field Agent details

Create Field Agent

Manage Field Agent

Create Field Agent

Back

Name: Enter User Name

Contact Number: Contact Number

Password: Enter Password

Confirm Password: Confirm Password

Submit

Manage Field Agent

संवाद

VENDOR DASHBOARD

Vendor1

Field Agent Management

Manage and organize Field Agent details

Create Field Agent

Manage Field Agent

Field Agent List

Back

Sr.	Agent Name	Contact Number	Password	Status	Action
9	FieldAgent1	7355273989	12345678	<input checked="" type="checkbox"/>	
10	ayushman	7355273989	12345678	<input checked="" type="checkbox"/>	

Assign Campaign

संवाद



Campaign Management

Assigned Campaigns

VENDOR DASHBOARD

Vendor1

Assigned Campaign List

Sr. No.	Campaign Name	Campaign Images	Campaign PDF	Description	Start Date	End Date
21	Ayushman Bharat			Ayushman Bharat is a flagship healthcare initiative by the Government of India, launched in 2018, aimed at providing free healthcare services to economically vulnerable Indian citizens. It is the world's largest government-funded health insurance scheme.	2024-01-17	2025-04-22

Campaign History

संवाद

Campaign History

Campaign List

VENDOR DASHBOARD

Vendor1

Campaign List

Sr.	Campaign Name	Start Date	End Date	Action
1	Ayushman Bharat	04-04-2025	15-04-2025	<div>View Campaign</div>

Campaign Details

☰

संवाद

VENDOR DASHBOARD

Vendor1

Campaign Details

Back

Campaign Information	
Name:	Ayushman Bharat
Description:	Ayushman Bharat is a flagship healthcare initiative by the Government of India, launched in 2018, aimed at providing free healthcare services to economically vulnerable Indian citizens. It is the world's largest government-funded health insurance scheme.
Start Date:	17-Jan-2024
End Date:	22-Apr-2025

Assigned Field Agents	
Vendor Name	Vendor Number
FieldAgent1	(7355273989)
ayushman	(7355273989)

Campaign Image

✓✗

✓✗

✓✗

✓✗

Field Worker

Field Workers play a crucial role in on-ground verification of advertising campaigns. Their functionalities include:

- **On-ground Verification:** Conduct **physical inspections** of outdoor media placements and verify installations of campaign by click (photo/video)
- **Real-time Media Capture:** Capture **high-resolution, geo-tagged, and timestamped photos/videos** with real time and date to validate campaign execution.

Application Login Page on Mobile



The image shows a mobile application login page with a red-to-orange gradient background. At the top, the status bar displays the time 6:05, a clock icon, and network status (7.41 KB/s, VoWiFi, VoWiFi, 59% battery). The login form is a white rounded rectangle centered on the screen. It features a red circular logo with a stylized 'Om' symbol. Below the logo, the text 'लॉगिन करें' (Login) is written in bold, followed by 'फ़्रील्ड एजेंट मैनेजमेन्ट' (Freelance Agent Management) in a smaller font. There are two input fields: 'मोबाइल नंबर डाले' (Enter mobile number) and 'पासवर्ड डाले' (Enter password), both with placeholder text. The password field has an eye icon for toggling visibility. A red 'Log In' button is at the bottom of the form. The bottom of the screen shows the Android navigation bar.

6:05 ☰ ... 7.41 KB/s VoWiFi VoWiFi 59%



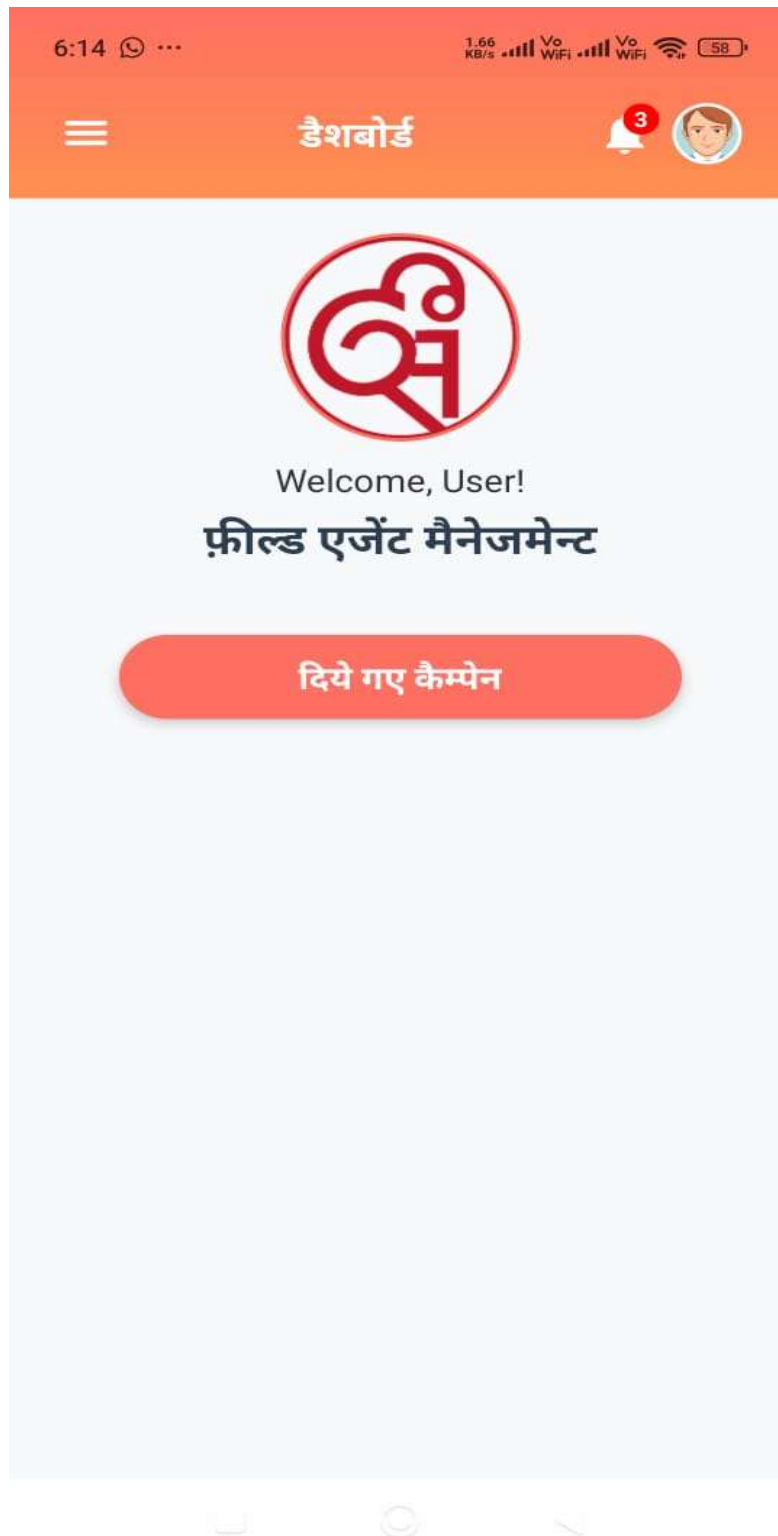
लॉगिन करें
फ़्रील्ड एजेंट मैनेजमेन्ट

मोबाइल नंबर डाले

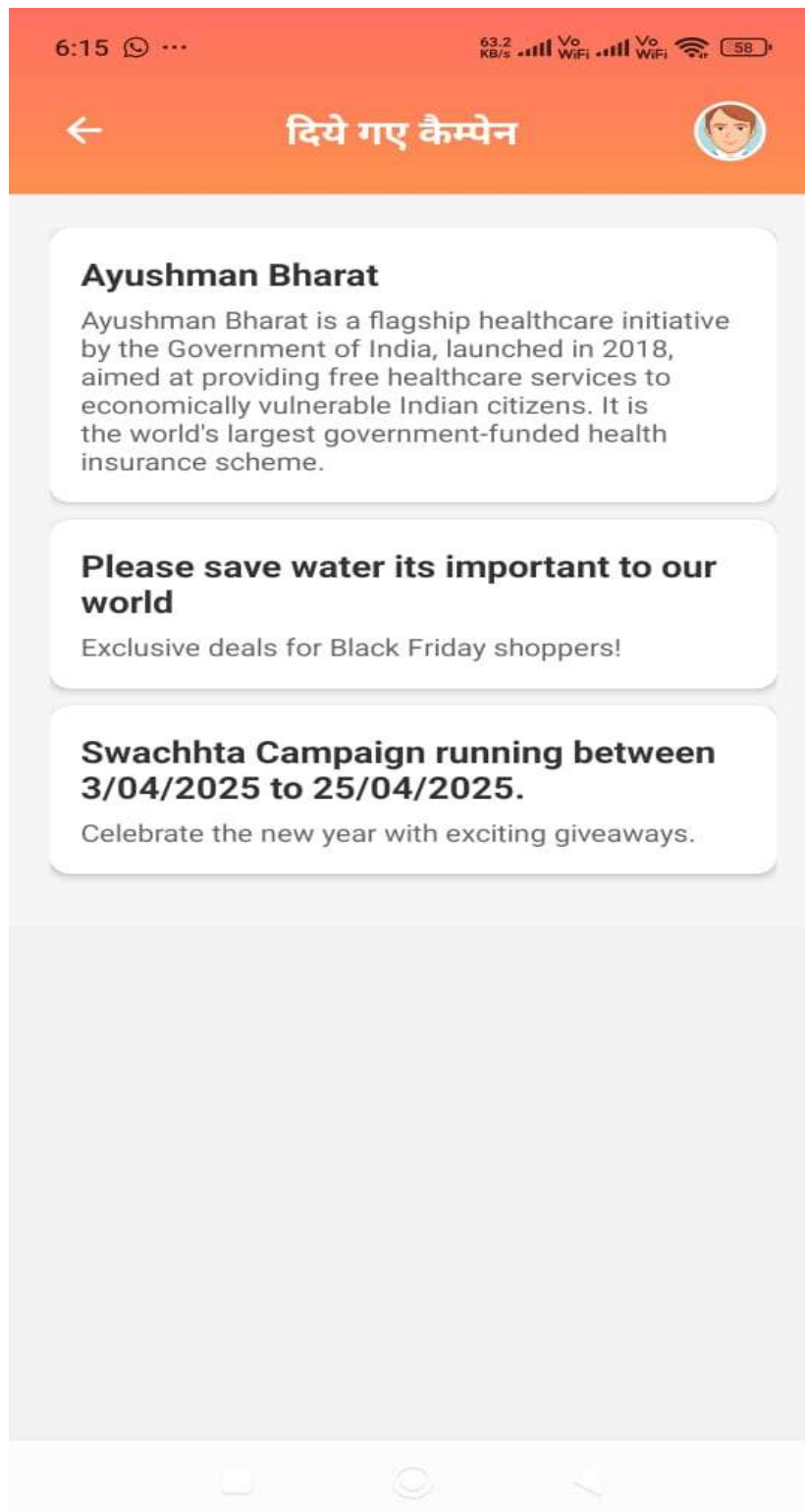
पासवर्ड डाले 

Log In

Application Dashboard



Assigned Campaign




Verify Campaign

6:15

65.7 KB/s Vo WiFi Vo WiFi 58

←

Campaign Details



Ayushman Bharat

Ayushman Bharat is a flagship healthcare initiative by the Government of India, launched in 2018, aimed at providing free healthcare services to economically vulnerable Indian citizens. It is the world's largest government-funded health insurance scheme.

17

Start Date: 2024-01-17

17

End Date: 2025-04-22

Distance from Declared Location in Kms:

Capture


✓


Completed Campaign

📍 Lat: 80.2779883, Lon: 26.4978183

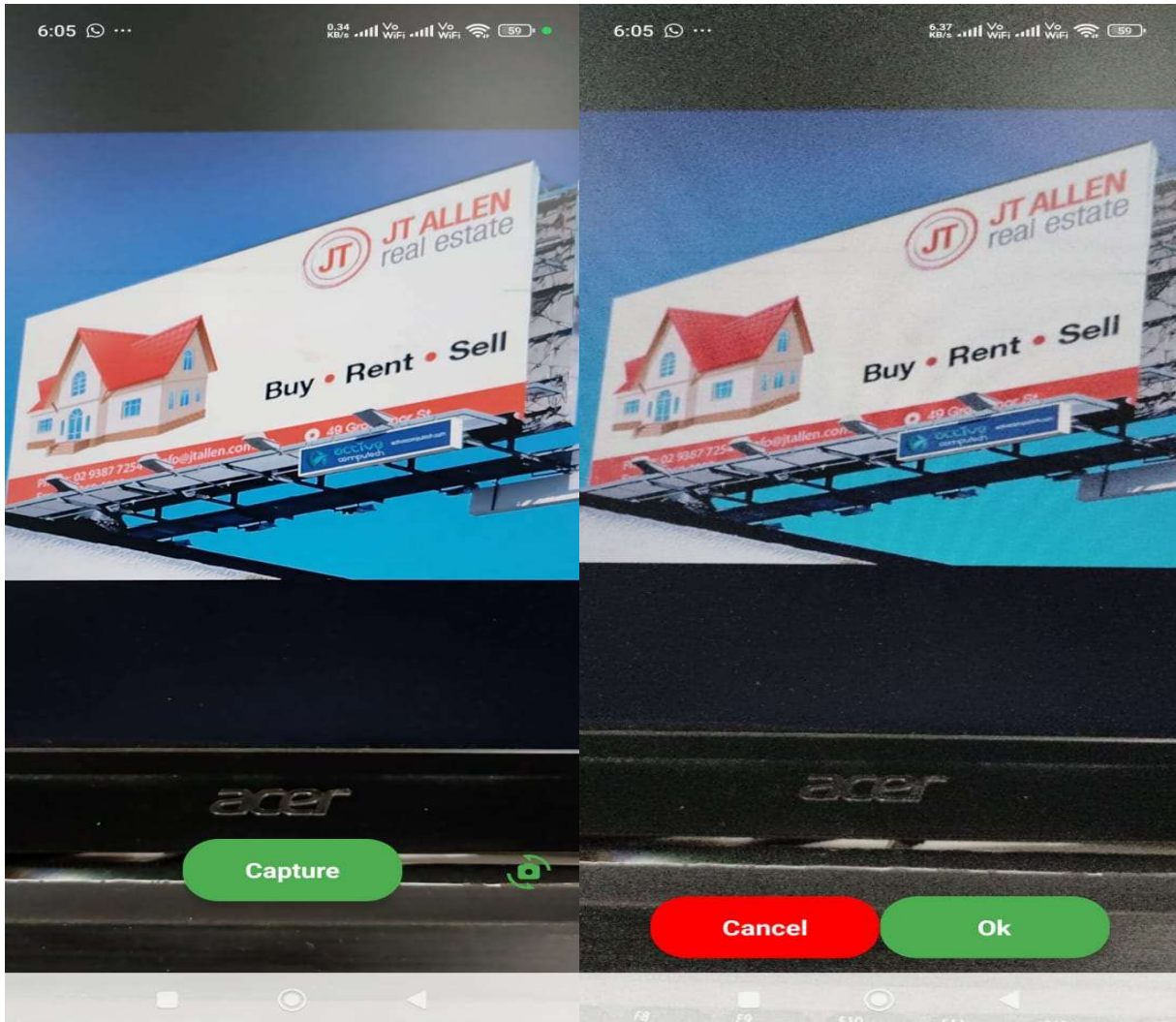
17

Capture Date: 10/4/2025, 6:05:15 pm

 Employee ID: 1









Capture Image

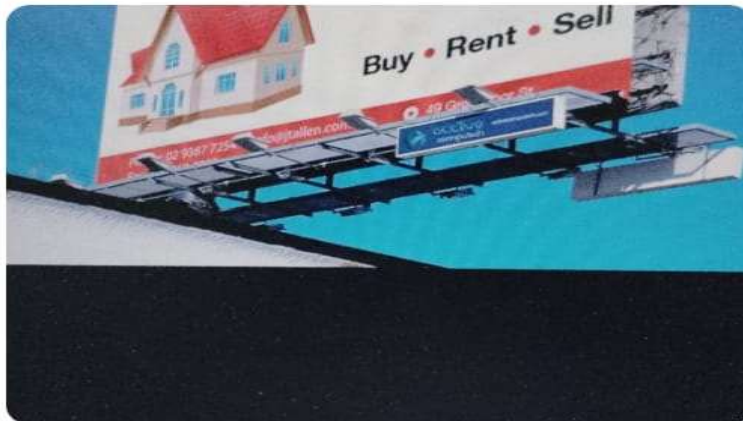


Captured Image Details View



Capture Details

-  Latitude: 80.2779883
-  Longitude: 26.4978183
-  Date: 10/4/2025, 6:05:15 pm
-  FieldAgent Id: 1
-  Start Date: 10/4/2025, 6:05:15 pm
-  End Date: 10/4/2025, 6:05:15 pm



3. Key Functional Requirements

3.1 Location-based Monitoring

- **GIS-based Interactive Map:** Display all campaign locations dynamically using GIS mapping technology.
- **Real-time Location Tracking:** Continuously update campaign execution statuses using **GPS-based location tracking**.
- **Historical Campaign Data:** Maintain a **history of campaign locations** for audits and retrospective analysis.

3.2 Tamper-proof Photo/Video Uploads

- **Metadata Validation:** Ensure all uploaded media files include **authentic timestamps and GPS coordinates**.
- **Offline Mode Support:** Allow field workers to **capture data offline** and automatically sync upon **internet connectivity restoration**.
- **Automated Integrity Checks:** Implement AI-based detection to identify **altered or manipulated media files**.

3.3 Automated Report Generation

- **Customizable Report Templates:** Generate reports detailing **campaign performance, compliance status, and analytics**.
- **Multi-format Support:** Export reports in **Excel, PDF** for flexible data usage.
- **Scheduled Reports:** Enable automated daily, weekly, and monthly reports for stakeholders.

3.4 Role-based Access Control

- **User Role Permissions:** Define **clear access levels** for Admins, Vendors, and Field Workers.
- **Secure Authentication:** Implement **Multi-Factor Authentication (MFA)** for **Admins and Vendors**.
- **Audit Logs:** Track all **user activities, modifications, and approvals** to maintain accountability.

3.5 Real-time Alerts and Notifications

- **Push Notifications:** Notify stakeholders regarding campaign approvals, rejections, and updates.
- **Email & SMS Alerts:** Send **automated reminders and alerts** for pending tasks or compliance failures.
- **Issue Escalation System:** Implement an **escalation hierarchy** for unresolved issues, directing critical problems to higher authorities.