OmniMind ICCC Platform

Empowering Urban Management with Cutting-Edge Technology

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SMART SOLUTIONS FOR MODERN CITIES
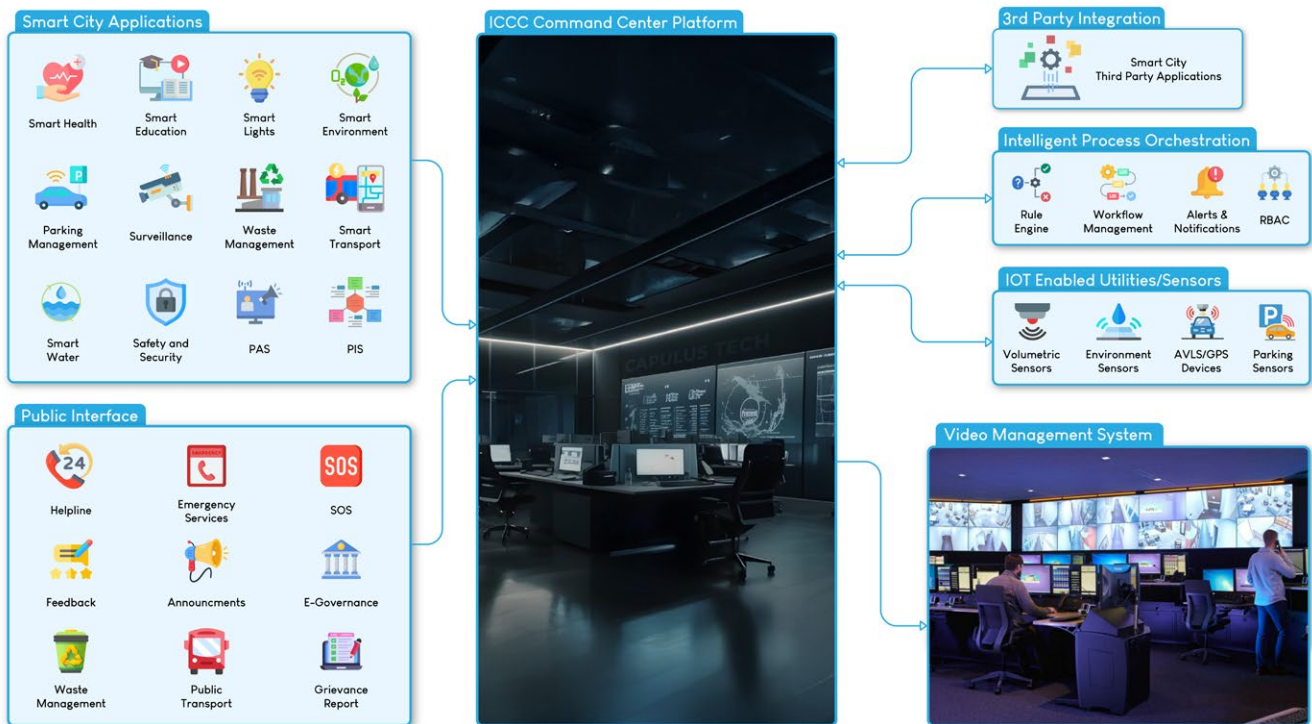
About Us

Capulus Technologies is a leading IT company specializing in cloud computing, artificial intelligence, IoT, and smart urban solutions. Since 2017, we have been transforming industries with innovative technology, including projects like Smart Parking, Smart Healthcare, and Integrated Command & Control Centres. Our commitment to public safety and efficiency has led to groundbreaking solutions, such as the Karnataka State Police public-facing app, implemented statewide.

Capulus Technologies is a pioneering leader in smart city innovations, dedicated to enhancing urban infrastructure through the **OmniMind Integrated Command & Control Centre (ICCC) Platform.** Our mission is to empower cities with advanced technologies, data-driven insights, and seamless automation, ensuring a safer, more efficient, and sustainable urban environment.

MAKE IN INDIA

OmniMind ICCC Platform: The Core of Smart City

The OmniMind Integrated Command and Control Center (ICCC) Platform serves as the backbone of smart city operations, providing a centralized, intelligent system to integrate, monitor, and manage diverse city functions seamlessly. Designed to enhance urban governance, the ICCC leverages advanced technologies such as AI-powered analytics, IoT connectivity, and big data processing to deliver real-time insights and predictive capabilities.

Through continuous monitoring, automated workflows, and rapid response mechanisms, our platform empowers city administrators to make data-driven decisions, optimize resource utilization, and enhance service delivery. The ICCC facilitates seamless integration with existing smart city solutions, including traffic management, waste disposal, emergency services, and public safety networks, ensuring a unified and efficient urban ecosystem.

By fostering interdepartmental coordination and improving situational awareness, the ICCC platform enables authorities to proactively address challenges, mitigate risks, and enhance the overall quality of life for citizens. With its scalable and adaptable architecture, the platform evolves alongside growing urban demands, making cities more resilient, responsive, and sustainable.

Key Features

01 Integrated MIS Dashboard

The Integrated Management Information System (MIS) provides a comprehensive view of urban infrastructure in real time:

- **Smart Parking:** Live tracking of parking availability and demand

- **Smart Mobility:** AI-driven traffic pattern analysis and congestion management.

- **Safety & Security:** AI-powered surveillance and alert mechanisms.

- **Lighting & Energy Management:** IoT-enabled streetlights for energy efficiency.

- **Waste & Environment Monitoring:** Real-time waste collection tracking and environmental quality assessment.

- **Geospatial Database Integration:** GIS-based utilities mapping and land management.

- **Citizen Engagement & Grievance Redressal:** AI-driven complaint resolution system.
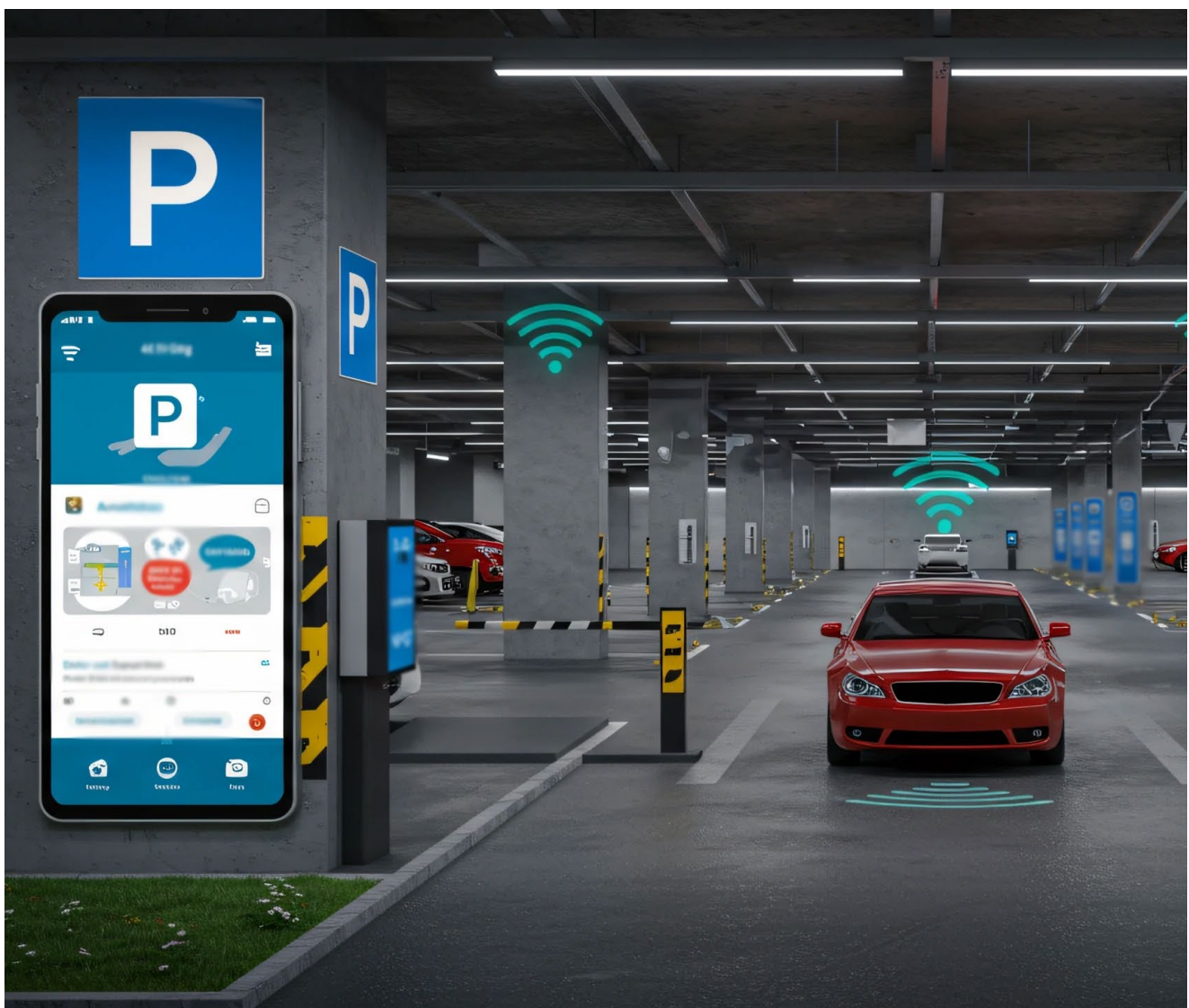
02 City Surveillance System

A robust surveillance system ensures public safety through:

- **AI-Powered Live Surveillance:** 24/7 high-resolution video monitoring with real-time analytics for proactive security.

- **Comprehensive Camera Management:** Integration of Fixed, PTZ, and HD cameras with clear labeling, PTZ controls, and geospatial mapping for optimized monitoring.

- **Video Management System:** A centralized Video Management System (VMS) integrates all existing city surveillance cameras, enabling real-time monitoring, AI-powered analytics, and automated alerts for enhanced security, traffic management, and emergency response.

- **AI-Driven Alerts & Notifications:** Automated detection of security breaches, unusual activities, fire, and smoke incidents with instant alerts to emergency responders.

- **Integrated Fire & Emergency Response:** Live tracking of fire stations, police, petroleum vehicles, workforce availability, hydrant vehicles, and seamless coordination for rapid incident resolution.

- **Audio-Video Streaming & Evidence Management:** High-quality streaming, synchronized audio-video feeds, and secure storage for law enforcement and legal proceedings.

03 Smart Parking Management System

An advanced system to efficiently manage parking operations:

- **MLCP & On-Street Parking:** Real-time monitoring and management of multi-level car parks (MLCP) and on-street parking spaces.

- **Workforce & User Management:** Tracking the number of staff and users for efficient operations.

- **Fair & Revenue Details:** Comprehensive analysis of parking fares, revenue collection, and financial insights.

- **Parking Location Mapping:** GIS-based visualization of parking locations for better accessibility and guidance.

- **Entry & Occupancy Statistics:** Real-time data on the number of vehicle entries, occupancy status, and available spaces.

- **Graphical Data & Reports:** Visual representation of parking trends, peak hours, and revenue analytics.

04 Smart Education System

A technology-driven system to enhance educational outcomes:

- **Institution & Academic Performance Management:** Data-driven decision-making for improved student success rates.

- **Attendance & Grievance Systems:** Automated tracking of student attendance and streamlined grievance resolution.

- **Resource Optimization:** AI-driven allocation of educational assets, including classrooms, libraries, and digital tools.

- **Student & Teacher Insights:** Real-time dashboards displaying the number of students, passing percentages, teacher-student ratios, and attendance trends.

- **Live Monitoring & Alerts:** Instant notifications for parents and administrators regarding attendance, academic progress, and emergency alerts.

- **Library & Learning Resource Management:** Digitally integrated libraries with accessible learning materials and automated resource tracking.

- **Parental Engagement:** A dedicated platform for parents to track student performance, attendance, and school activities.

05 Smart Waste Management System

A data-driven system for efficient waste management:

- **Real-time Collection Tracking:** AI-driven route optimization for waste collection, improving efficiency and reducing fuel consumption.

- **RFID & GPS-Enabled Waste Monitoring:** Tracking bin fill levels, collection schedules, and vehicle movement for improved sanitation services.

- **Waste Analytics & Complaint Management:** Data-driven dashboards displaying real-time collection statistics, grievances, and public engagement metrics.

- **Live Tracking & Status Updates:** Monitoring of waste collection vehicles, registered houses, staff attendance, and alerts for missed pickups.

- **Comprehensive Waste Data:** Categorization of waste (e-waste, medical, recyclable, non-recyclable) with tonnage reports, recycling details, and transfer station mapping.

- **Interactive Visualization & Reports:** Ward-wise waste collection heat maps, daily collected bin counts, complaint statistics, and graphical analysis of problem areas.
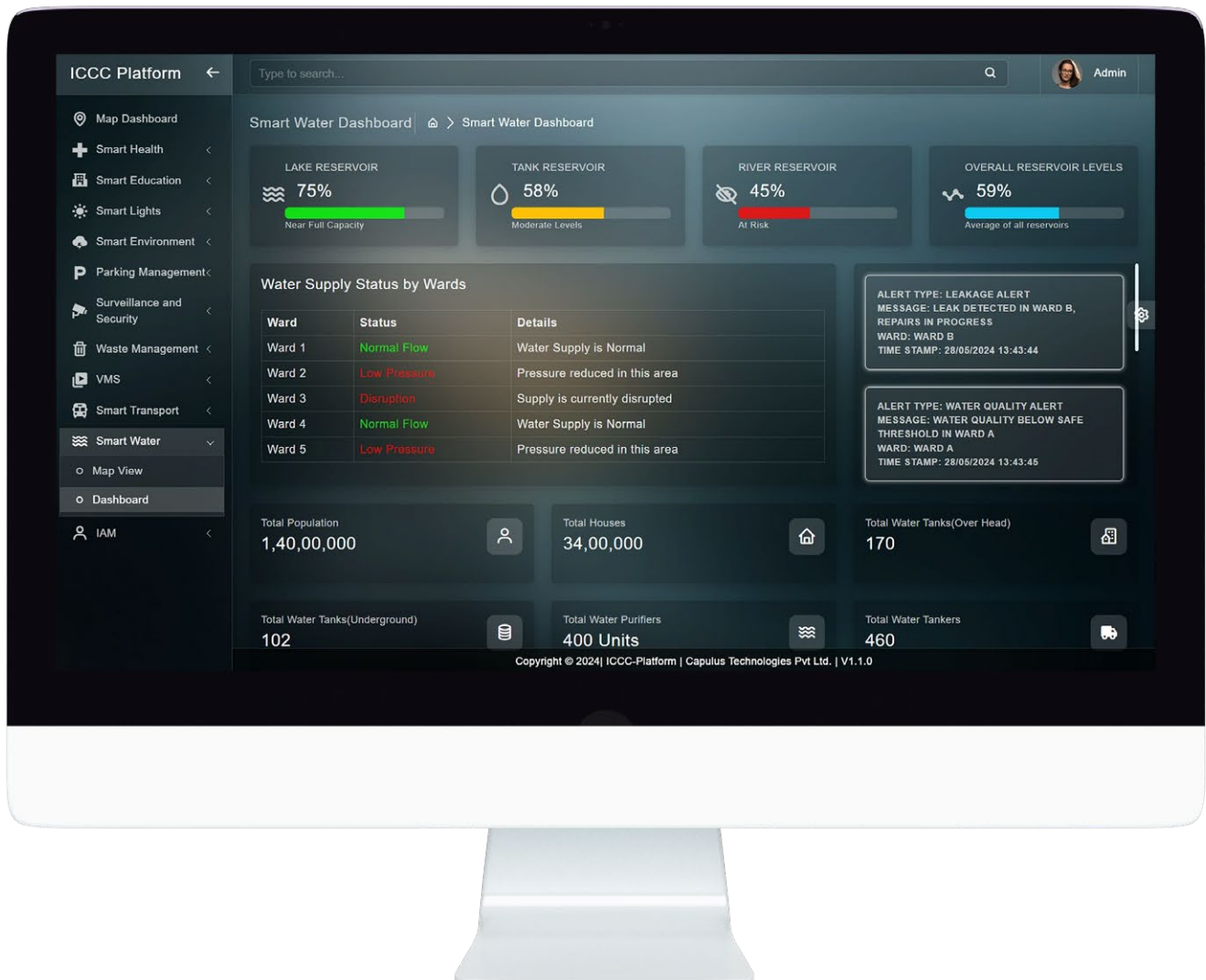
06 Smart Healthcare System

A comprehensive healthcare system for real-time monitoring and predictive analytics:

- **Hospital Operations:** Digital patient records, bed availability tracking, and telemedicine integration for efficient hospital management.

- **Pharmacy & Lab Services:** Smart inventory management, real-time health data tracking, and most-tested disease insights.

- **Health Data Analytics:** Predictive insights for outbreak prevention, disease trends, and hospital occupancy analysis.

- **Live Patient Statistics:** Monitoring total patients, doctor-patient ratio, birth and death statistics, and age-wise demographic breakdown.

- **Emergency & Alerts System:** Real-time notifications on pandemic situations, bed availability, and hospital capacity utilization.

- **Geospatial Mapping & Visualization:** Hospital locations, laboratory networks, and disease spread analytics with interactive dashboards.
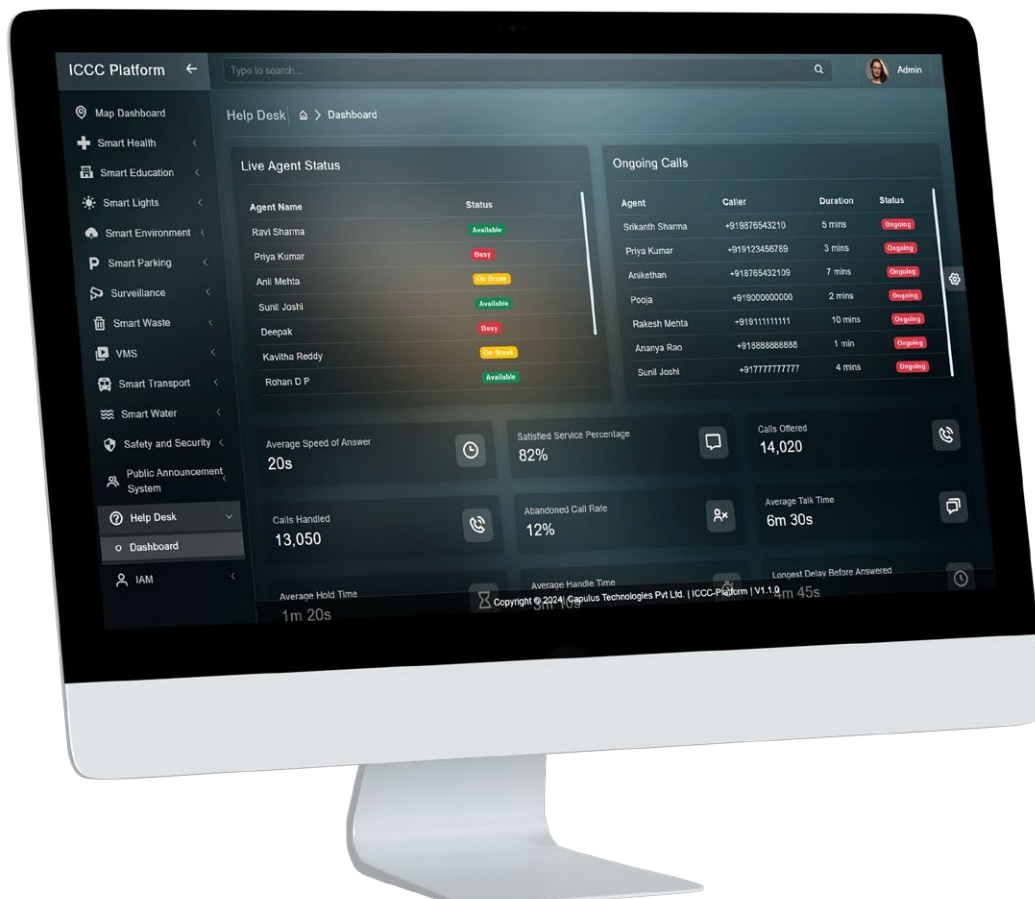
07 Smart Water Management System

A real-time system for monitoring and optimizing water resources:

- **Water Quality & Flow Monitoring:** Continuous tracking of raw water inflow, turbidity, pH content, and chlorine levels at Water Treatment Plants (WTP).

- **Leakage Detection & Damage Prevention:** IoT-based sensors for early warnings and real-time tracking of pipe conditions.

- **Smart Billing & Usage Analytics:** Ward-based water consumption, forecasting, and automated billing insights.

- **Live Tanker & Resource Tracking:** GIS-based visualization of tankers, OHT inflow/outflow, and pressure at critical zones.

- **Predictive Analytics & Grievance Management:** AI-driven insights on water demand, supply trends, and area-based grievance statistics.

- **Interactive Dashboards & Alerts:** Real-time reports on water storage capacity, waste reduction strategies, and public notifications.

08 Integrated Helpdesk System

An advanced system for efficient query resolution and service monitoring:

- **Service Level Analysis:** Real-time performance tracking of city services to ensure quality and efficiency.

- **Call Handling & Resolution Metrics:** Continuous monitoring of citizen queries, ensuring timely and effective resolutions.

- **Response Time Metrics:** Key parameters include Average Speed of Answer, Service Level Percentage, and Call Handling Time.

- **Call Volume & Trends:** Insights on Calls Offered, Calls Handled, Abandoned Call Rate, and Outbound Call Metrics.

- **Operational Efficiency Metrics:** Evaluating Average Talk Time, Hold Time, Handle Time, and Longest Delay before Answered.

- **Call Abandonment Analysis:** Monitoring Average Delay before Abandonment and Longest Delay before Abandonment.

- **Post-Call Processing:** Tracking After Call Work (Wrap-up) to assess agent efficiency and service effectiveness.

- **Automated Reporting & Alerts:** AI-driven reports and real-time alerts for better decision-making and citizen satisfaction.

09 Safety and Security

Ensuring a safer urban environment through advanced technology and real-time monitoring.

- **Smart Incident Reporting & Analysis:** AI-driven analytics to detect crime patterns, optimize response strategies, and enhance public safety.

- **IoT-Based Fire & Smoke Detection:** Real-time hazard alerts using sensor networks, enabling faster emergency response and coordination.

- **GPS-Enabled Fleet & Vehicle Tracking:** Continuous monitoring and route optimization for emergency service vehicles to ensure swift response times.

- **GIS-Integrated Live Alerts Dashboard:** Real-time visualization of incidents, distress calls, and hazards to improve situational awareness and decision-making.

- **Fire Hydrant & Infrastructure Management:** GIS-based monitoring of fire hydrants, ensuring availability, maintenance, and readiness for emergencies.

10 Intelligent Transport System

A cutting-edge system designed to enhance urban mobility and transport efficiency:

- **Live Vehicle Tracking:** Real-time tracking of public transport vehicles on GIS maps, improving visibility and monitoring.

- **AVLS Integration:** Automatic Vehicle Location System (AVLS) integration for accurate vehicle tracking and reporting.

- **Real-Time Arrival & Departure Updates:** Providing passengers with accurate updates on vehicle arrival and departure times at stops.

- **Passenger Information System:** Dynamic, location-based information for passengers as vehicles approach their stops.

- **Route Deviation & Exception Tracking:** Monitoring and capturing route deviations, missed stops, and over-speeding incidents.

- **Fleet & Performance Dashboards:** Centralized dashboard for tracking fleet performance, fuel consumption, and transport KPIs.

- **Incident Reporting & SOS Alerts:** Real-time reporting system for emergency alerts from stranded or moving vehicles.

- **Route & Maintenance Scheduling:** Efficient creation of transport routes, schedules, and daily maintenance task alerts.

11 Public Announcement System

A comprehensive system to enhance public awareness and emergency communication:

- **Citywide Announcements:** Automated and live emergency alerts for real-time crisis management and public safety.

- **Information Dissemination:** Effective communication of government messages, traffic updates, and event notifications.

- **Real-Time Monitoring & Status Updates:** Dashboard for tracking active, idle, and faulty announcement systems across the city.

- **Environmental & Digital Displays:** Smart boards showcasing temperature, pollution levels, noise monitoring, and safety alerts.

- **Live Audio & Video Broadcasts:** Streaming of important updates through voice announcements and video display boards.

- **Custom Alerts & Maintenance Tracking:** Automated alerts for system failures, maintenance schedules, and high-priority broadcasts.

- **Audience & Engagement Analytics:** Data-driven insights on system reach, effectiveness, and response time of critical messages.

12 Smart Mobility (Intelligent Traffic Management)

A comprehensive system for real-time traffic monitoring and congestion reduction:

- **Traffic Violation & Enforcement:** AI-based detection of violations such as helmet non-compliance, wrong parking, triple riding, and red light jumping.

- **Congestion & Incident Monitoring:** Real-time analysis of traffic congestion, accidents, and unexpected roadblocks with instant alerts.

- **Automated Challan & Payment System:** Digital challan issuance for traffic violations with seamless online payment integration.

- **Integration with ATCS:** Integration with adaptive traffic light control based on congestion patterns, reducing average wait time at signals.

- **Vehicle & Crowd Analytics:** Automatic Number Plate Recognition (ANPR) for vehicle tracking, type-based vehicle counts, and crowd density monitoring.

- **Integration with Environment Sensors:** Noise and air quality monitoring at key traffic junctions for pollution control measures.

- **Public Information & Announcement System:** Dynamic message signs and voice announcements for traffic updates, diversions, and alerts.

- **Citywide Vehicle Movement Insights:** Monitoring total incoming and outgoing vehicles in the city for optimized traffic planning and policy-making.

13 Smart Street Lighting & Energy Management

A comprehensive system to enhance energy efficiency and urban safety:

- **Lighting & Energy Control:** Centralized management of city streetlights with automated on/off scheduling and dimming for energy conservation.

- **Status Monitoring & Alerts:** Real-time tracking of streetlight functionality, with automated fault detection and maintenance alerts.

- **Energy Usage Tracking:** Data-driven energy consumption reports and annual efficiency assessments for sustainability planning.

- **Adaptive Smart Lighting:** IoT-enabled streetlights that adjust brightness based on ambient conditions and traffic density.

- **Maintenance & Asset Management:** GIS-based mapping of streetlight locations with automated scheduling for preventive maintenance.
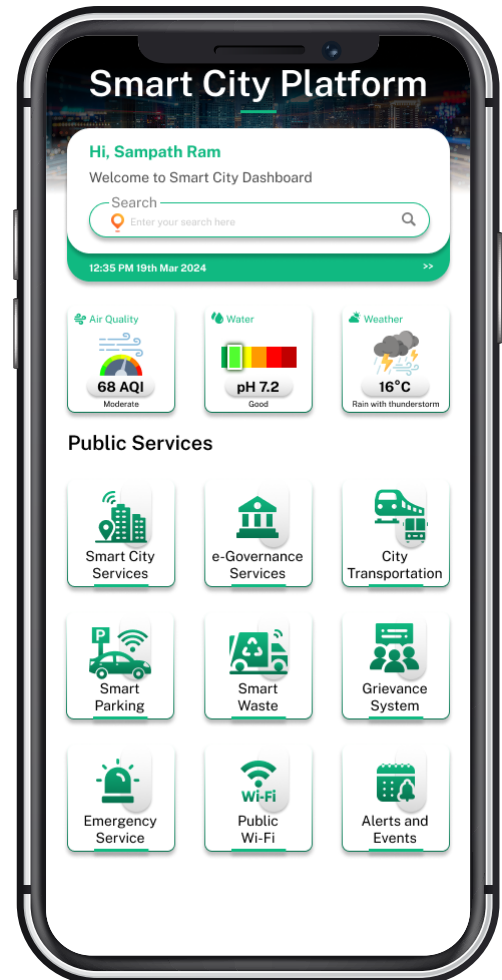
One City One App

A citizen-centric mobile platform for seamless city services and real-time updates:
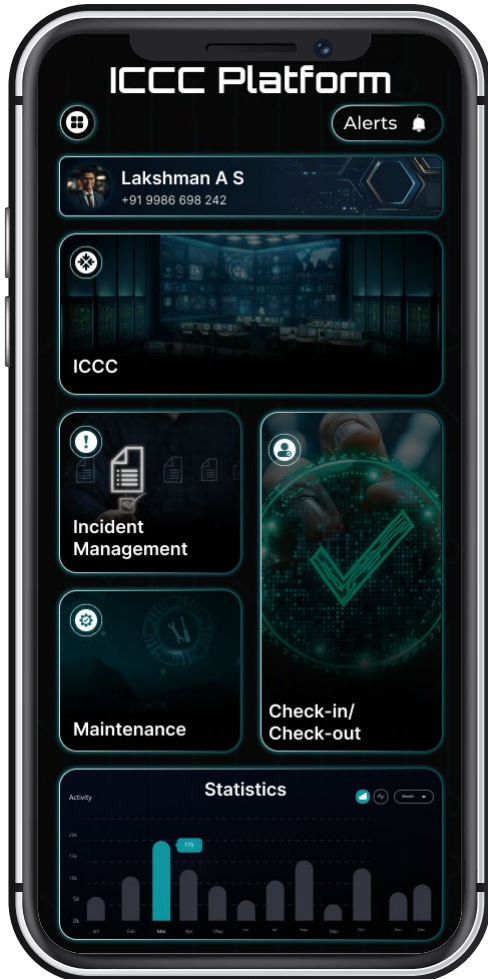
Key Features:

● **Citizen Grievance Redressal**
Easily register, track, and resolve grievances related to civic services.

● **Live Public Transport Information**
Get real-time updates on public transport, including arrival times and live vehicle tracking.

● **City Information Hub**
Access details on tourist attractions, government services, public utilities, and emergency contacts.

● **Smart Waste Management Integration**
Report missed garbage collection, track waste collection vehicles, and monitor sanitation services.

● **Emergency Vehicle Tracking**
Real-time tracking of ambulances, police cars, and fire service vehicles for efficient emergency response.

● **SOS & Emergency Alerts**
One-touch SOS feature for immediate assistance, linked to emergency response teams.

● **Real-Time Alerts & Notifications**
Stay informed with automated updates on city events, weather, road closures, and emergencies.

● **Utility Bill Payments**
Seamlessly pay electricity, water, and other municipal bills through an integrated platform.

● **Public Transport Route Details**
Get detailed bus routes, schedules, and stop locations for hassle-free travel planning.

Field personnel & Admin Mobile App

A powerful mobile solution for administrators to efficiently manage field operations and personnel.

Key Features:

- **User & Role Management**
  Manage user accounts, assign roles, and control access based on responsibilities.

- **Task Assignment & Monitoring**
  Assign tasks to field personnel, set deadlines, and track real-time progress.

- **Incident Management**
  Monitor incident reports with multimedia attachments and take necessary actions.

- **Attendance & Workforce Tracking**
  Monitor attendance logs and track field personnel movement using GPS.

- **Fuel & Resource Management**
  Access fuel consumption logs and manage resource allocation efficiently.

- **Automated Alerts & Notifications**
  Receive instant notifications on task updates, incidents, and critical alerts.

- **Reports & Analytics**
  Generate and review detailed reports on task completion, field activities, and incident resolutions.

With its comprehensive features and real-time capabilities, the Admin Mobile Application revolutionizes field operations management, ensuring efficiency, transparency, and swift decision-making. By leveraging smart technology, administrators can enhance service delivery, optimize resources, and improve overall operational effectiveness.

Benefits

Transforming Cities with Smart Technology for Safety, Efficiency, and Sustainability

- **Enhanced Urban Safety:** 24/7 surveillance, AI-powered crime detection, and emergency response coordination ensure a safer city.

- **Improved Citizen Services:** One-stop digital platform for grievance redressal, bill payments, and public service access.

- **Operational Efficiency:** Automation, data analytics, and integrated systems streamline urban management and reduce costs.

- **Data-Driven Decision Making:** AI-powered analytics provide real-time insights for proactive governance and infrastructure planning.

- **Sustainability & Smart Energy Use:** Energy-efficient street lighting, optimized waste collection, and environmental monitoring promote eco-friendly city management.

- **Traffic & Mobility Optimization:** AI-driven intelligent traffic management, real-time transport tracking, and congestion control improve urban mobility.

- **Citizen Engagement & Transparency:** Interactive dashboards, real-time updates, and public announcements enhance communication between authorities and citizens.

- **Disaster & Emergency Preparedness:** Integrated emergency response systems, SOS alerts, and real-time monitoring enable quick disaster management and recovery.

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