Pre-Sales Proposal: Smart City IoT Monitoring Platform

Introduction: Solving Real Problems for Growing Urban Areas

In modern cities, urban expansion, traffic congestion, inefficient public lighting, unmanaged waste, and growing demand for safety and transparency pose significant challenges for local governments and municipal operators.

This project is designed to address these issues head-on through a centralized IoT platform that enables real-time monitoring, alerting, analytics, and management of smart infrastructure - namely:

- Smart Cameras for parking and surveillance
- Smart Streetlights for optimized energy use
- Smart Bins for efficient waste collection

Our goal is to empower cities and operators to make data-driven decisions, reduce costs, enhance safety, and optimize resource usage by consolidating these three domains into a single, interactive system.

What Problem Are We Solving?

As cities grow, infrastructure management becomes more fragmented and reactive. We solve issues like:

- Manual streetlight checks causing delays
- Overflowing garbage bins due to fixed collection
- No real-time parking visibility
- Scattered alarm systems
- Poor decisions due to missing analytics

With our solution, cities move from reactive to predictive, gaining visibility, analytics, and real-time control over infrastructure.

Why This Application - The Core Logic

This platform is the nervous system of smart cities. Using real-time IoT data, it enables:

- Smart Lights to save energy and detect outages
- Smart Bins to optimize collection

- Smart Cameras to monitor parking

Built to be modular, scalable, and intuitive, it fits city operators aiming to automate and optimize infrastructure management.

System Features - Full Breakdown

Main Dashboard:

- Live Map of all IoT devices
- Stats: Total Lights, Bins, Cameras
- Live Alarms panel

Alarms Overview Page:

- Unified feed from all connectors
- Filterable by type, zone, time

Lights Page:

- Cards for total, offline, energy consumption
- Device Table: Index, Zone, Brightness, Power
- Line Chart: Consumption over time
- Bar Chart: Brightness per zone
- Map view

Bins Page:

- Cards for average fill, condition
- Table: Index, Fill Level, Weight
- Line Chart: Fill by zone
- Bar Chart: Waste per zone
- Map + Click to open device charts

Cameras Page:

- List with zone and status
- Gauge for total active
- Grid view of parking spots (free/occupied)
- Optional video feed

Architecture & Integration

- Cloud or on-prem deployment
- MQTT/Event Grid telemetry
- Caching APIs
- Azure AD authentication
- Teams integration for alerts
- Docker/Kubernetes ready

Why Choose This Solution

Unified monitoring

Real-time data

Scalable

User-friendly UI

Actionable analytics

Modular and cost-efficient

Conclusion - Making Smart Cities a Reality

This platform transforms cities with real-time visibility into lighting, waste, and surveillance systems. It lowers costs, improves response times, and enables better urban service. Partner with us to start your smart city transformation today.