OMNIWOT

Wireless IOT Monitoring & Automation

Waste Management Solution using IoT

www.omniwot.com

Challenges in Waste Management

Unoptimized Collection Routes
Inefficient waste collection leads to unnecessary fuel consumption and labor costs.

Overfilled or Underutilized Bins
Without real-time monitoring, bins may overflow or get emptied before reaching capacity.

Illegal Dumping & Environmental Hazards
Unmonitored waste disposal can lead to illegal dumping, posing risks to public health and safety.

Lack of Data-Driven Decision Making
Traditional waste management relies on fixed schedules rather than real-time demand.

OmniWOT's Smart IoT Solution

OmniWOT's wireless and cloud-connected sensors provide real-time monitoring, automated alerts, and data-driven insights to optimize waste collection and environmental management.

Comprehensive Waste Monitoring & Automation
Smart Bin Sensors
Wireless sensors monitor bin fill levels, detecting when they need to be emptied.

Route Optimization
AI-powered analytics determine the most efficient waste collection routes, reducing fuel usage and labor costs.

Illegal Dumping Detection
Sensors and surveillance integrations detect unauthorized waste disposal, triggering alerts for immediate action.

Environmental Monitoring
Air quality, odor detection, and temperature sensors help track pollution levels in waste collection zones.

OmniWOT's Waste Management Solution utilizes LoRaWAN sensors to streamline waste collection with real-time bin monitoring. Receive instant alerts when bins are full, optimize collection routes, and track assets for efficient management. Enhance operational efficiency and reduce costs with data-driven insights.

Types of sensors driving the Waste Management Solution

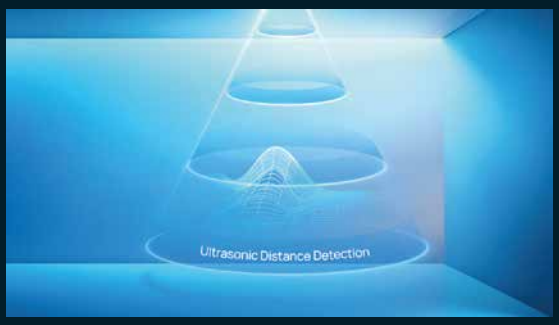
1) Level Sensor
2) GPS Tracking Sensor
3) Bin Open/Close Sensor
4) Temperature Detection
5) Smart Gateway

Effortless IoT Integration with OmniWOT's Open Cloud Platform

OmniWOT's Open Cloud Platform is designed for seamless connectivity, enabling **Wireless IoT sensors to effortlessly onboard via LPWAN/LoRaWAN Gateways.**

With a **hardware-agnostic architecture**,it supports a broad range of IoT devices, providing **scalability and flexibility** for diverse applications.

Unlock real-time monitoring, smart automation, and data-driven insights with minimal setup effort, making IoT integration more efficient and future-ready.



Key Features to Highlight for Smart Trash Bin Fill Monitoring:

- **Real-Time Fill Level Detection**
  Continuously monitor how full each bin is using ultrasonic or IR sensors connected via LoRaWAN.

- **Threshold-Based Alerts**
  Automatic alerts triggered when bins reach defined fill levels (e.g., 75%, 90%, 100%).

- **Optimized Collection Scheduling**
  Avoid unnecessary pickups; dispatch collection only when bins are near full, saving time and cost.

- **Geo-Tagging & Bin Location Tracking**
  Each bin can be tracked via GPS integration for route planning and operational efficiency.

- **Battery-Operated with Long Life**
  Low-power design ensures sensors operate for years without maintenance.

- **Tamper & Movement Detection**
  Alerts when bins are moved, tipped over, or accessed inappropriately.

- **Integration with Central Dashboard**
  All data visualized on a centralized platform for facility managers and logistics teams.

- **Data Logging & Analytics**
  Historical data helps analyze waste trends, peak usage times, and location-based fill patterns.

- **Support for Multiple Bin Types**
  Compatible with organic, plastic, recyclable, and general waste bins.

- **Compliance & Sustainability Reporting**
  Supports ESG and internal waste reduction goals by offering transparent, trackable data.

Simple, Clear & Timely Alerts

- **Bin Full Alerts:** Instant notifications when bins reach capacity to prevent overflow.
- **Route Efficiency Alerts:** Alerts for optimized collection schedules, reducing unnecessary trips.
- **Environmental Hazard Alerts:** Notifications for high pollution levels or irregular dumping activities.
- **Equipment Maintenance Alerts:** Proactive alerts for waste collection vehicles and compactors needing maintenance.

Key Benefits of OmniWOT's Waste Management

✅ Operational Efficiency – Smart scheduling and optimized routes reduce costs.
✅ Eco-Friendly – Minimizes carbon footprint by reducing unnecessary waste collection trips.
✅ Improved Hygiene & Safety – Prevents overflowing bins and illegal waste disposal.
✅ Data-Driven Decision Making – Real-time insights enhance city planning and waste reduction strategies.

Transform Waste Management with OmniWOT's IoT Solution

OmniWOT's advanced wireless sensors, real-time analytics, and automation enable cleaner, smarter, and more sustainable waste management.

OMNIWOT
Innovate, Integrate & Empower

omniwot.com | +91 75502 28044 | info@omniwot.com

OmniWOT Technologies Private Limited, 103, Tower 5,
L&T Raintree Boulevard Bellary Road,
Byatarayanapura, Bengaluru, India-560092.