

Introduction

RFID helps the refuse disposal and recycling industry to improve the efficiency of collection services. Sensor Waste bin tags enable users to identify and record all bin assets, to simplify tracking, communication, and invoicing and restrain unauthorized use of bins. A clear and accurate overview of all bin assets is key and the very first step leading to smart waste management. The tool provides instant access to the quantity, location and bin structure, and enables easy and quick owner identification.

Service verification is ensured by RFID features (UHF) and requires an RFID reader.

RFID tags are used by local councils to check that all bins on a round have been processed. They also provide a way of reuniting misplaced bins with the premises they belong to.

- Tracking Bins With RFID
- Checking Bins Have Been Emptied
- Bins With RFID Help Distribution Services
- Control which drivers have access into specific bins
- Check who has accessed your bins and when

Uses

The RFID reader records various data including quantum of collection, date and time of collection, household coverage and others. Information collected from the RFID tags is then transferred to the host computer system or control room and the data is stored in a database for analysis.

The industries which can take the benefits from RFID BIN Collection system Software include:

- Local Government.
- Transport
- Education
- Franchise
- Healthcare
- Hospitality etc.

Features

- It helps to improve the Service.
- Simple & Reliable service verification via RFID features.
- Easy access to information.
- It displays the real time activity.
- Personal data protection via user login (mobile app).

The screenshot displays the 'All SWM Collection Shift Roster Information' page. It features a navigation sidebar on the left with options like Dashboard, Masters, Operation, Configurations, Attendance, Citizen Grievance, Waste Collection (with a sub-option for Collection Shift Roster), User Management, MIS & Reports, and Daily Monitoring. The main content area includes filter dropdowns for 'ALL ZONE', 'WARD', and 'Select All', a 'Search' button, and a 'Search Records' input field. Below these is a table with the following data:

Sr. No	Asset Category	Zone	Ward no	Shift	Total Assets To Be Deployed
1	RFID Tag Disinfectant	Thiruvotthiyur-1	Depot	B	1
2	RFID Tag Disinfectant	Thiruvotthiyur-1	Depot	C	1
3	RFID Tag Disinfectant	Ambattur-7	DEPOT	C	1
4	RFID Tag Disinfectant	Ambattur-7	DEPOT	A	1
5	RFID Tag Disinfectant	Manali-2	Depot	A	1
6	RFID Tag Disinfectant	Thiruvotthiyur-1	Depot	A	1

Technical Specifications:

S.no.	Parameter	Remarks
A	GENERAL	
1	Centralized and Integrated Solution	Ajeevi Complaint Management System
2	Technology Used	COTS (Commercial Off The Shelf) Technology
3	Access Features	RBAC Model (Role-based access and control)
4	Architecture	N-tier scalable architecture, modular design, robust software
5	Framework	.NET Core Framework, ASP.Net MVC
6	Database	SQL Server 2016 and above, Mongo DB, Posgre SQL, Unifieddatabase for all SWM data
7	Operating System	Windows / Open Source Linux
8	Front end	Java Script, JQuery, React JS, Angular, HTML, Bootstrap, RazorPages
9	IOT Hub Integration	Kafka, Rabbit MQ, Socket Programming, Web APIs
10	Application Availability	High availability and DR replicability
11	Single-Sign On facility	Available
12	Audit Trail	Ability for logging, audit, and tracking of any changes carried outon the database
13	Interoperability Standards	Can be integrated with any other application through web APIs(Push or Pull)
14	Security Features	<ol style="list-style-type: none"> 1. Security design with well-designed identity management system, security of physical and digital assets, data and network security, backup and recovery and disaster recovery system. 2. Support for security features such as W3C specifications, Information access/transfer protocols SOAP, HTTP/HTTPS, etc.

		3. API Integration allowed post authentication
15	External Communication	Through SMS Gateway and SMTP Integration
16	Web Enabled Solution	Yes
17	Services for GIS Integration	Google Maps, ESRI Map, Any other available open map
18	GIS Features	Geomapping, Geotagging, POI, Geofencing through Geo JSON and drawing tool
19	Deployment Features	SaaS Model, On-Premise Model, BOOT Model
20	Cloud Deployment	Amazon AWS, Microsoft Azure
20	Information Security	ISO 27001 certified System
21	Operations	ISO 9001 Certified
B	FUNCTIONAL FEATURES	
➤	General Features	It improves data accuracy & availability
		Enhanced quality and traceability
		Tracking assets and managing inventory
		It makes the service monitorable & accurate