SOLUTION - GEOLOCATION FOR THE WASTE MANAGEMENT SECTOR

RFiD DISCOVERY
A Paragon ID company

Tracking and geolocation solutions for the waste collection and treatment sector

Waste collection and treatment have become major challenges for local authorities, impacting the environment, society, and the economy.

With rising treatment costs and strict environmental regulations, authorities have to find ways to reduce household, commercial and other waste while meeting compliance requirements.

To achieve this, local authorities must innovate to balance cost efficiency, environmental responsibility, and the need for transparency while ensuring user satisfaction.

IoT for the waste management sector

The IoT (Internet of Things), or the use of connected technologies such as active and passive RFID, BLE, Wi-Fi, GPS, and many others, can revolutionise waste collection.

The solutions include geolocation and unique identification of bins, trucks, and containers, particularly for mechanised collection.

By addressing challenges such as transportation efficiency, CO2 emissions, and management costs, these solutions encourage users to improve waste sorting.

Tracking and geolocation of bins and trucks help to

- Prevent loss or theft by monitoring locations
- **Uniquely** identify equipment in need of maintenance or replacement
- Optimise routes with real-time location and fill level data
- Automate collection and tracking for underground collection points

Tracking of individual containers enables

- Automatic identification of collected bins
- Monitoring usage frequency
- Billing based on collection frequency and waste volume to encourage better sorting
- Sending push notifications and awareness campaigns to improve sorting and reduce waste volume

Solution

We adapt to our clients' needs and environment by offering integrated solutions that combine hardware and software. Our SaaS software platform uses range of technologies including active or passive RFID (HF and UHF), BLE and GPS.

How does it work?

Typically each bin is fitted with a passive RFID tag, using HF or UHF techology. The unique tag ID is associated with information about the item, such as bin type, capacity, purchase date and more, in a central database.

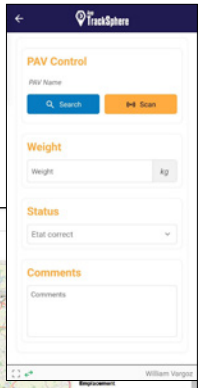
Bin information is either captured with handheld RFID scanners or automatically with vehicle mounted readers. GPS technology can capture the location of the vehicle at the time of the scan. Data is then transmitted via a mobile network to a central database.

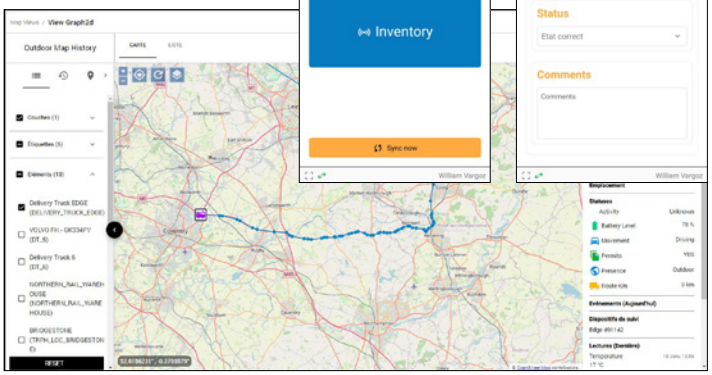
Handheld RFID reader

For the waste collection and management sector, the platform offers a user-friendly web interface that enables you to:

- Visualise bins and containers with real-time data updates
- Configure various notifications including
  - Movement alerts
  - Sensor removal alerts
  - Immobilisation alerts
- Create zones (e.g. restricted areas, storage zones) with associated alerts
- Grant specific clients access to designated bins
- Store bin route history for up to six months
- View and export a bin's route for a specific day
- Generate reports based on key performance indicators (KPIs)

Handheld screenshots





Example of truck movement history

Key benefits

- Optimised logistics and reduced operational costs
- Improved service efficiency
- Reduced carbon foootprint
- Transparency and communication with users
- Prevention of theft, unauthorised movements, and material losses
- Data analysis for fleet optimisation and demand forecasting
- Efficient and sustainable

Related solutions

As a leader in identification solutions, we provide a range of products and services tailored to the waste collection and treatment sector. This includes access control solutions for waste disposal sites, such as customised access cards.

Why choose RFiD Discovery?

GS1 UK Approved | RAIN ALLIANCE

RFiD Discovery, part of Paragon iD, provides integrated tracking solutions for equipment, inventory, and people through a multi-technology geolocation platform. RFiD Discovery uses cutting-edge technologies including active and passive RFID, BLE, Wi-Fi and GPS. Our connected solutions help clients worldwide increase productivity, reduce costs, and enhance safety across many industries.

Paragon ID is a leader in identification solutions and the largest RFID label manufacturer in Europe.

Today, the RFiD Discovery solution is deployed at over 200 sites (hospitals and industrial facilities) to track and locate sensitive assets including medical equipment, containers, and tools.

RFiD Discovery
Unit 611, Milton Keynes Business Centre,
Foxhunter Drive, Milton Keynes, MK14 6GD, UK

T. +44 208 102 1883
E. info@rfiddiscovery.com
W. www.rfiddiscovery.com

vs 03/25

RFiD Discovery