



eGarbage

An intelligent urban waste collection system.

Collection routes are optimized and costs are improved by constant monitoring of waste container content level, thereby reducing fuel costs and air pollutant emissions.

Scenario:

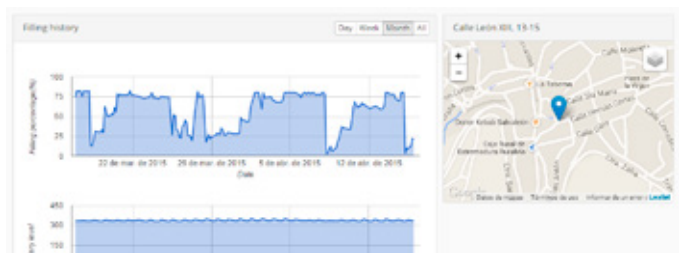
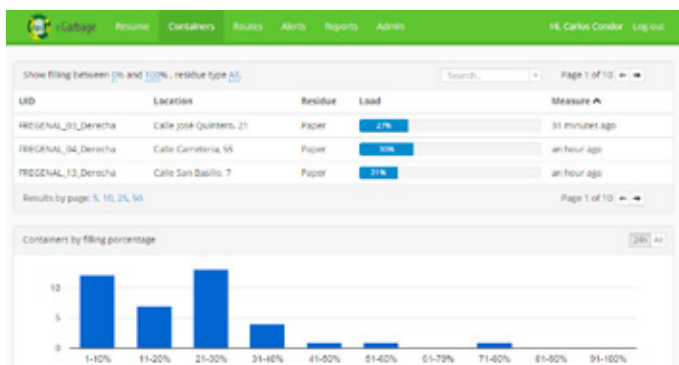
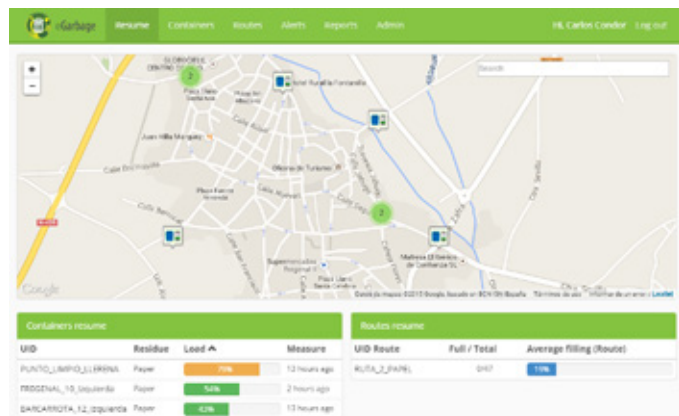
Currently, planning the collection of solid urban waste is based on predefined routes and experience, causing unnecessary costs and underutilization of equipment. Often empty containers are collected and full containers overloaded causing an increase in cleaning costs. Knowing the content level of waste containers is critically important.

Solution:

The eGARBAGE system optimizes collection routes by constantly monitoring the content level of waste containers. By installing sensors in the containers it is possible to receive real-time alerts for collection based on container content level or for temperature variation (fires) enabling a reduction in damage liability and response time.

Benefits:

- Improve routing and changes collection frequency.
- Avoid containers overflowing.
- Fuel saving.
- Staffing cost-saving.
- Reduction of traffic congestion.
- CO2 Emissions reduction.
- Damage liability cost-saving.
- Citizen awareness.



How does it work?



ACTION

Real time data collection through fully autonomous and intelligent REMOTE AGENTS installed in the containers.

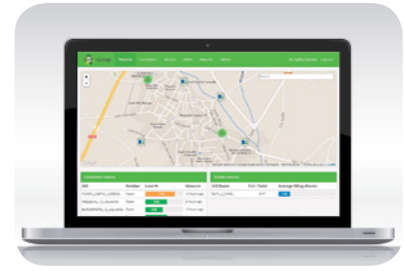


COMMUNICATION

Configurable REMOTE AGENTS to measure content level with minimal resolution time: 1 hour.

REMOTE AGENTS report the measurement wirelessly, via **Zigbee or GPRS**: A Zigbee wireless network is used for settings with dense container island. A Zigbee network is composed of REPETITION AND CONCENTRATION elements that store measurement data from a set of containers (REMOTE AGENTS) in the eGabbage repository through a GPRS data connection (not included).

Another communications option, ideal for isolated or high containers, is to have a GPRS data connection in each REMOTE AGENT.



INFORMATION

The eGabbage data repository is hosted on Wellness Telecom's Cloud Computing infrastructure which provides high data availability.

The application is offered in SaaS (Software as a Service) mode. This enables container content level evolution monitoring, container and route statistics exporting and optimized collection route development.

The data repository is designed with standard web technologies compatible with most management software used in the SWM (Solid Waste Management) sector.

Solution Outline:

