

# MAIN SYSTEM

Web service for service planning  
and collection monitoring

Completamente fruibile via web attraverso un sito dedicato che permette l'accesso sicuro ai dati per la pianificazione del servizio, il controllo e il monitoraggio della raccolta dei rifiuti e della flotta attraverso report avanzati analitici e grafici.

The software used to receive, manage and process data transmitted from mobile devices is housed in a server farm that takes care of and centralises maintenance and security.

## MAIN SYSTEM

A single platform – developed in line with the provisions of the Environment Ministerial Decree dated 13/02/2014 – allows users to closely monitor all phases of the waste collection process and to access information regarding waste collection services with just a few clicks, from utilities records to door-to-door collection, from deliveries to collection centres to vehicle operations, thanks to analytical and graphic presentations of waste collection trends.

## SERVICE PLANNING

Through the web service it is possible to define the work shifts by relating each differentiated waste type to a specific day of the week, then the users from which the waste is to be collected. The user selection can be done either directly from the waste collection tax roll or by selecting a specific area on the map. For each shift it is possible to specify the working times and the operator / vehicle / RFID reader associations. The system stores all the collection data and provides a detailed final report that can be consulted, in order to verify the work performed and the user waste collections with respect to the weekly schedule.



## MONITORING WASTE COLLECTION

The Operations Centre website allows users to plan daily services and check all data and processes relating to waste collection in real time via the use of tables, graphs and maps. Data is displayed in time windows chosen by the user and can be general or specific to the area and type of user in question (domestic, non-domestic, condominium).

Users can also check multiple reports regarding:

- waste contributions by type of user, collection percentages by type of waste, number of deliveries and volumes;
- daily deliveries via a map;
- annual collection trends for utilities, zones and waste;
- operator activities, recorded contributions and reports made;
- daily deliveries to the collection centre and documentation provided;
- outgoing trips from the collection centre and documentation provided;
- waste stock at the collection centre and time limits for stay.

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The system also allows managers to analyse the behaviour of individual users by looking at their contributions at home and at the collection centre, as well as any reports they have personally provided. Data is displayed in graph or table format and shows contribution performance over time.

Automatic notifications can also be sent via email/text message regarding specific users.

The system also comes with a dashboard that provides advanced data analysis and support for the implementation of a PAYT (Pay As You Throw) system in compliance with the provisions of the Environment Ministerial Decree dated 20/04/2017.

## VEHICLE FLEET MONITORING

Fleet control is simple and immediate thanks to the use of an integrated Google Maps API. Just click to view the current position of each vehicle on the map or to get an overview of the fleet via a map or satellite view.

Each icon represents a vehicle and can be customised in terms of type and colour so that users can immediately see which vehicles are distributed throughout the region.

The web service has a series of views and vehicle-dedicated reports that allow users to instantly perform in-detail checks:

- the roads travelled;
- the stops made;
- speed;
- daily activity details.

Via an analytical and graphical representation, users can check:

- where and when a power take-off was used;
- where and when a container lifter was used;
- where and when a vehicle unloaded waste;
- where and when brushes were activated and deactivated, in order to check which streets have actually been swept or washed.

Numerous checks can be activated via the simple installation of a GPS locator, which comes with numerous digital inputs in order to check use of equipment on board.

Users can also be automatically notified via email/text message when a vehicle is entering or leaving an area or has reached a point of interest.



