



InnoMatch

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LAS ROZAS DE MADRID CITY COUNCIL

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Technical Responsible for Smart City and Technological Innovation

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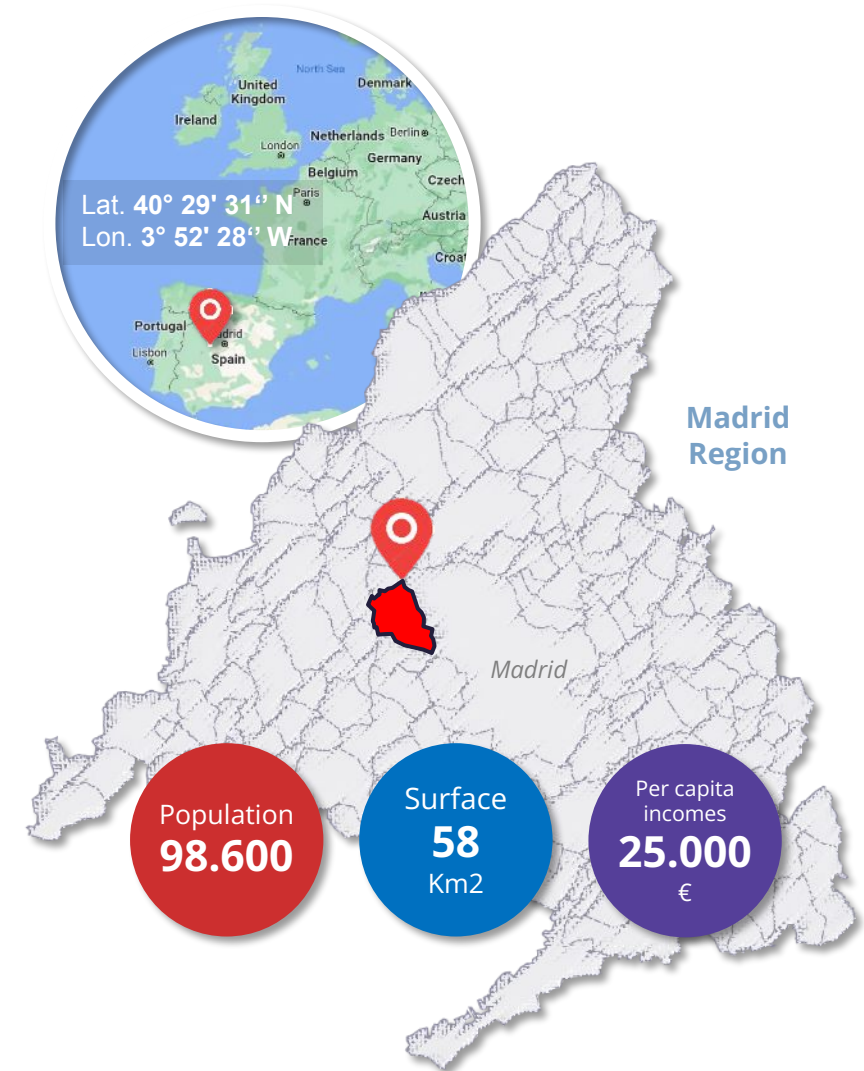
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Las Rozas City Council

Las Rozas de Madrid, Spain

What is at stake?

- **To develop a new city model** capable of facing new social, urban, environmental and economic challenges.
- **To move towards a more human and sustainable city** committed to people and the environment.
- **To promote digital transformation** of municipal services by incorporating innovation and new technologies.
- **To create a Smart Metropolitan Area** through collaboration with nearby municipalities as Madrid Oeste Tecnológico (MOT).



Meet the Team



Jaime Santamarta

Councilor for the
Environment, City
Services, Smart City and
Transport.



María Castillo

Director General for the
Environment



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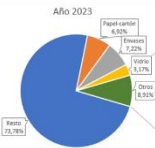
Technician for innovation
and digital systems

Current problem



PROBLEM

- E-commerce has increased the amount of paper and cardboard waste generated
- Traditional waste collection systems (scheduled pickups and public containers), are not enough
- Overflowing containers create environmental pollution and unhealthy places.
- Current selective collection methods are insufficient to manage the growing volume
- The load capacity of collection trucks with EASY system is limited to 1500kg.



CONTEXT

- Paper and cardboard waste represents 7% of the waste collected in the city
- The City Council has distributed thousands of separate collection bins and containers
- Innovative sensor-based filling control systems have been installed in containers.
- Compactor bins have been installed to increase capacity and reduce the collection service.
- High-capacity underground waste containers installed to improve collection services



OBJECTIVES

To implement innovative solutions in underground waste containers to improve the paper and cardboard collection service in the city, making it easier for citizens and traders to collect paper and cardboard, making the collection service more efficient, and reducing the environmental impact of the containers.

Underground compactor bins for paper and cardboard waste



Unmet need

No high-capacity paper and cardboard waste collection solutions equipped with compaction mechanisms have been found that are light enough to be collected at full load by trucks using the EASY hitch system.

What are we looking for

The City Council is looking a solution for an underground waste container with the following features

- Suitable for **paper and cardboard**
- **EASY-type** hitch system for a collection truck"
- Maximum loaded weight: **1500 kg**
- Underground box **compatible with the concrete container space**
- Equipped with an efficient **low-weight compaction system**.
- Equipped with **sensors and wireless communications** for real time filling level reporting and usage.
- **Web platform** for data management and integration with municipal services.

For users

- **Greater capacity and less overflow:** The compaction system allows more waste to be stored, preventing containers from filling up quickly and overflowing.
- **Improved hygiene and reduced odors:** Being underground, the waste is protected from wind, rain, and animals, reducing dirt and unpleasant smells in the surroundings.

For waste collection services

- **Optimized collection routes:** Fill-level sensors enable trucks to collect waste only when containers are full, reducing operational costs and improving logistics.
- **Lower collection frequency:** Thanks to compaction, containers take longer to fill, decreasing the need for frequent collections.

For the environment

- **Reduced pollutant emissions:** By reducing collection frequency, fuel consumption and CO₂ emissions from garbage trucks decrease.
- **Higher recycling rates and sustainability:** An efficient collection system encourages paper and cardboard recycling, preventing these materials from ending up in landfills and promoting a circular economy.



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Thank you



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