



# SMART INVENTORY

How can we optimize the preparation of inventories of elements located on public roads?



## Challenge

The Sacyr Environment business line aims to optimize the inventory operations carried out prior to the preparation of proposals to participate in public-private tenders.

## Objectives

To identify technological solutions to optimize the detection and identification of different static elements or road markings on public roadways in order to more efficiently and reliably evaluate the proposals of relevant services for Sacyr Environment such as: mobility inventory (parking lots, etc), maintenance of green areas, street cleaning, and waste collection.

## Aspects to Consider

We are looking for:

Solutions to automate the identification, geolocation, and classification process from videos or images.

Image capture solutions applicable in urban environments which respect the law and do not violate any rights.

Innovative solutions applicable to extended and perimetral areas of an urban environment.

The solutions must be able to evolve and adapt to equipment variations.

The solutions must provide recent and updated data.

## Problems to Solve

- Inventory campaigns are carried out manually and require covering very large areas of a territory.
- The inventories must be as recent as possible so that service offerings consider the latest changes in urban facilities.
- The success of the offers depends on the relevance and reliability of the inventory campaign.

## Benefits

- Acceleration of the data collection process for inventories of elements located on public roads.
- Improvement the sizing of necessary services with reliable and updated data.
- Optimization of resources to make data collection and processing processes more efficient for a better inventory.



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## We Look for...

- **Image capture solutions in urban environments.**
  - Mobile Mapping, GIS, Imaging satellites, Remote Sensing, Scanning 3D, etc.
- **Static object and road marking detection solutions:**
  - Solutions that allow for the automatic detection of objects from images: containers, green areas, fixed elements on public roads, road curbs, road markings, etc.
  - Automated geolocation of objects.
- **Object identification solutions:**
  - Technologies that make it possible to identify objects and classify them from images (i.e., deep learning).
- **Solutions that enable object accounting:**
  - Technologies to automate accounting and inventory of objects from images.