

**Session: Urban Resilience and Sustainability**

Local geographic observation  
and analysis of crime patterns  
and accidents in urban areas:  
The Public Security Police approach.

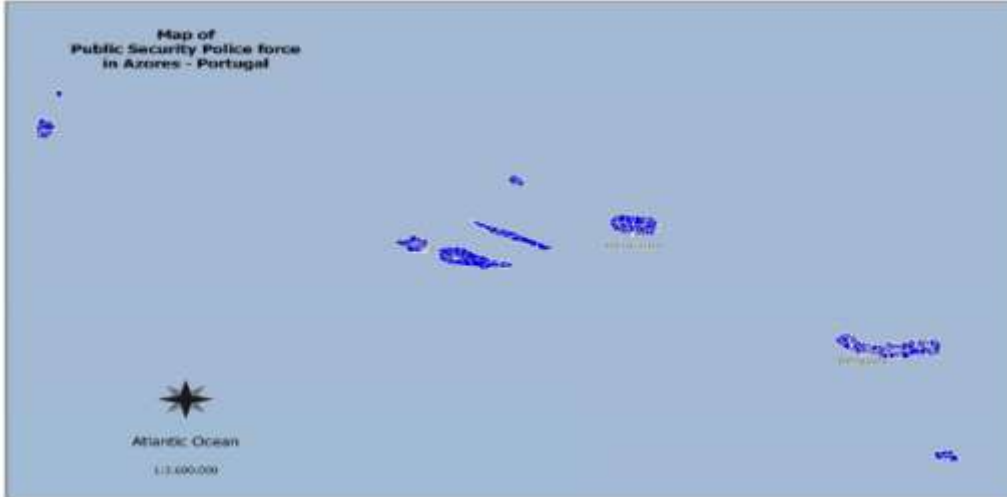


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**POLÍCIA**  
SEGURANÇA PÚBLICA

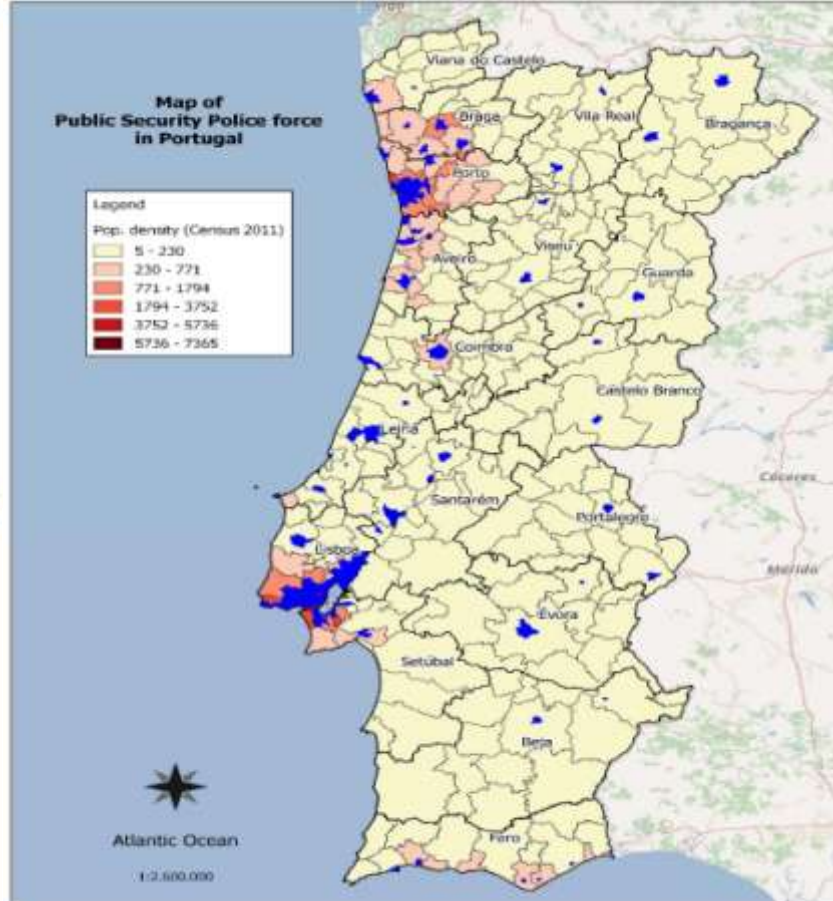
Map of  
Public Security Police force  
in Azores - Portugal



Map of  
Public Security Police force  
in Madeira - Portugal



Map of  
Public Security Police force  
in Portugal



Urban resilience is the ability of a city to resist, absorb, adapt and recover from the effects of exposure to “threats”, while preserving its structures and basic functions.

Resilient cities are built with the participation of all public institutions which interact in urban areas such as the **Public Security Police**.

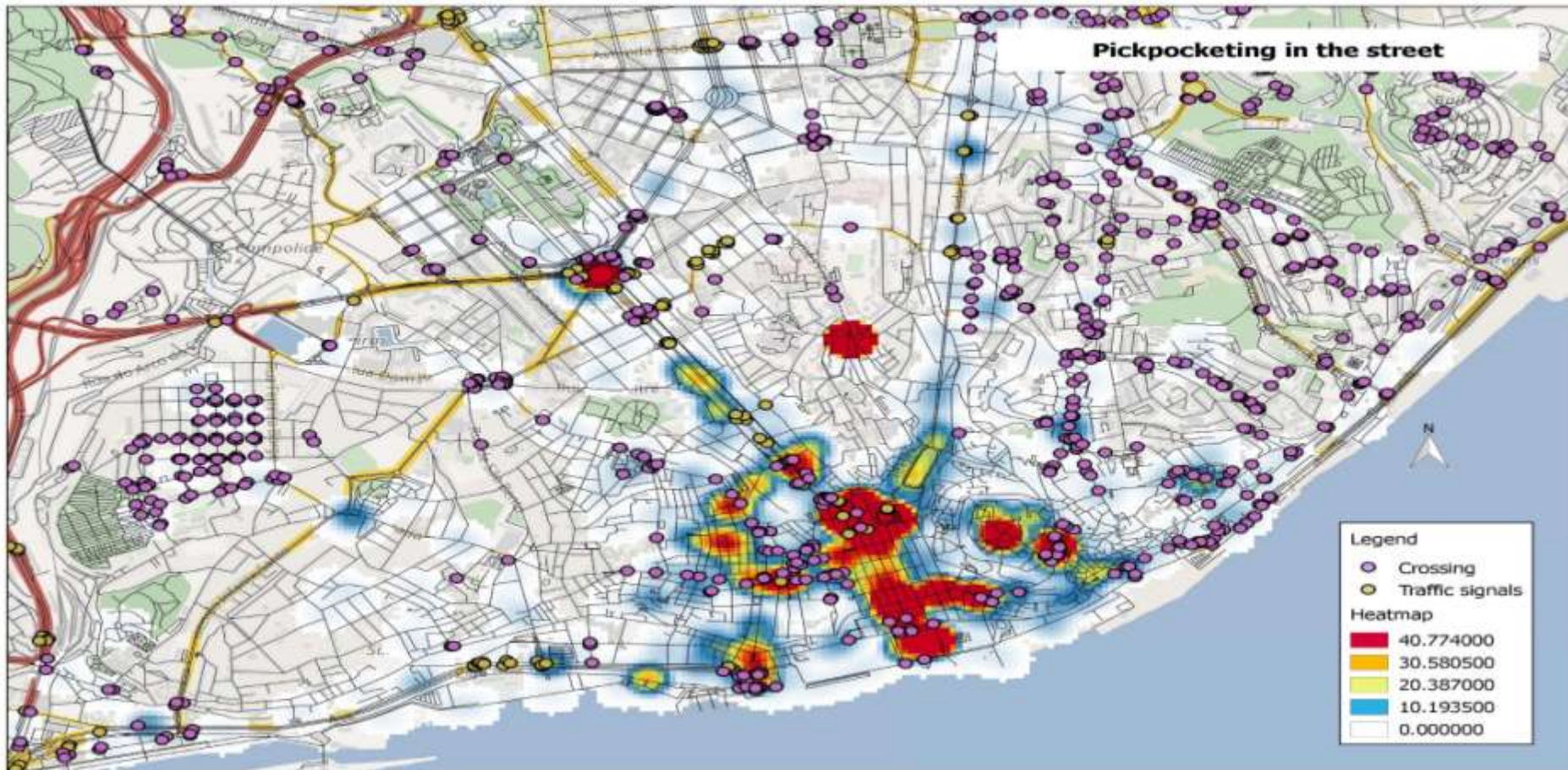
When analyzing the distribution of crimes with the help of GIS the **Public Security Police** is acting specifically on preserving and promoting the safety and welfare of citizens, towards an urban sustainability boosting environment.

**Presentation programme:**

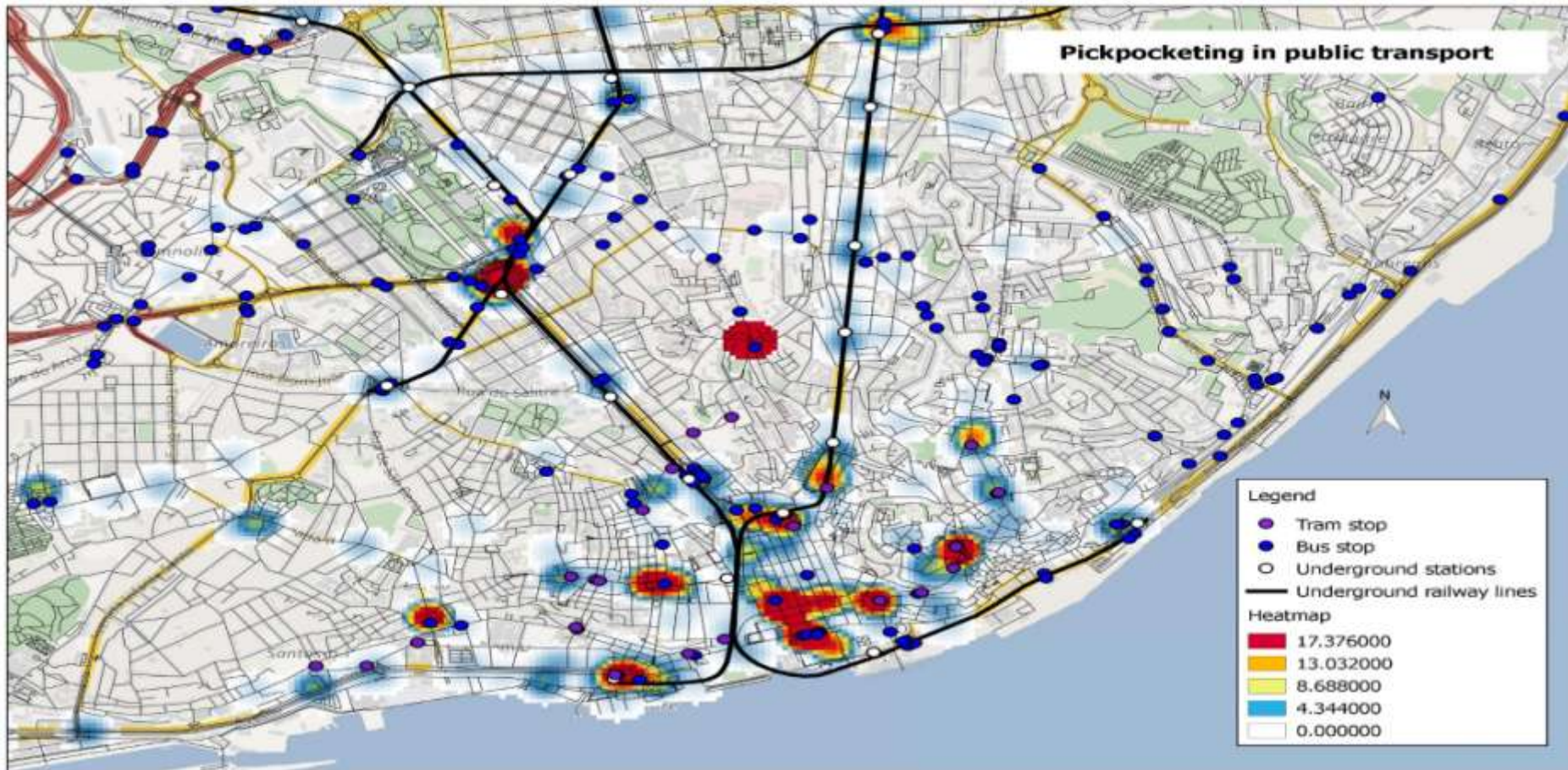
1. Pickpocketing in the street and in public transportation ;
  2. Opportunity theft of unattended objects;
  3. Simple physical assault;
4. Theft of personal possessions from unattended vehicle;
  5. Road traffic victims;
  6. Satellite imagery (project COPERNICUS);
  7. Predictive analysis.



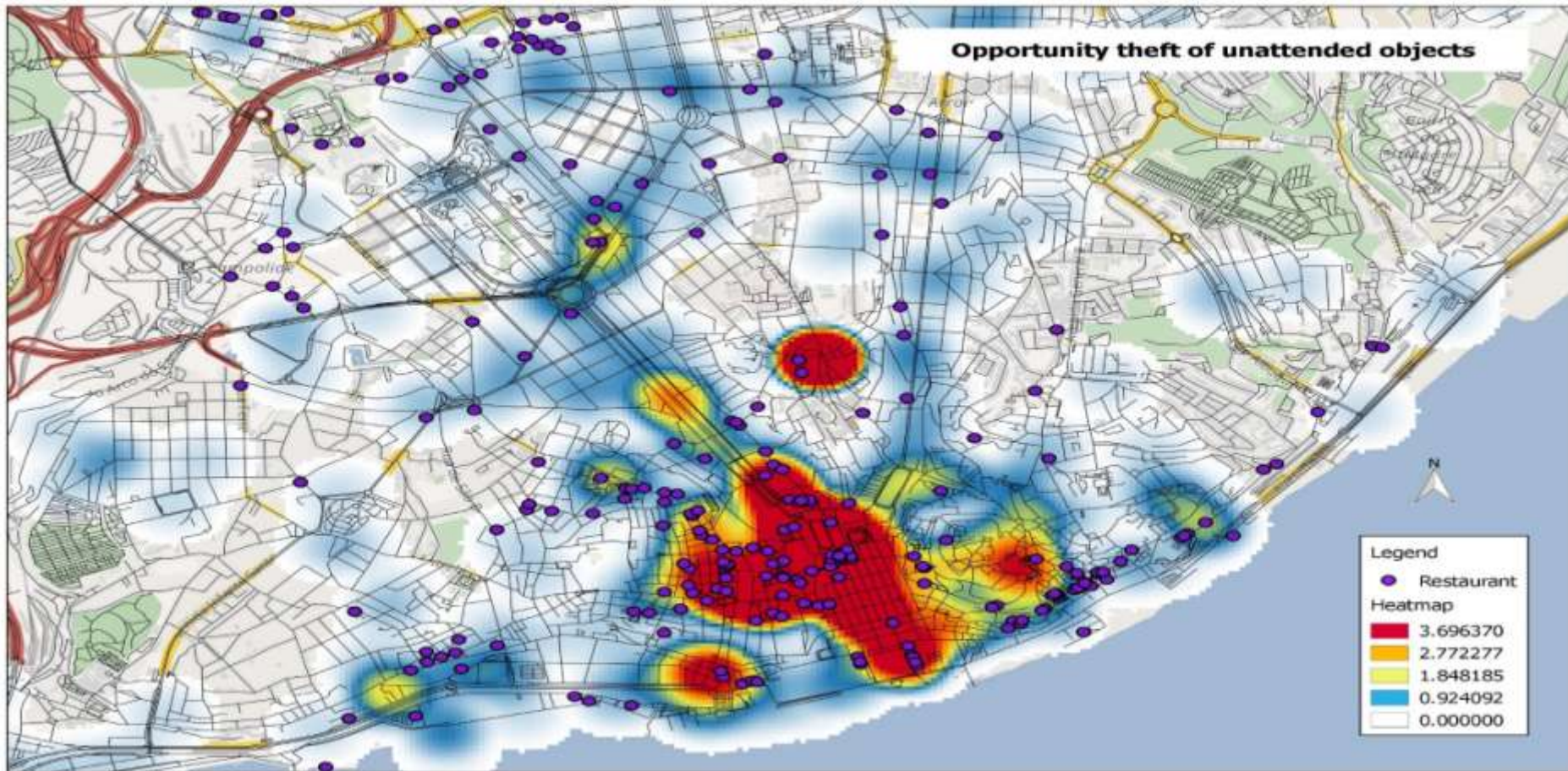
## Pickpocketing in the street



## Pickpocketing in public transport

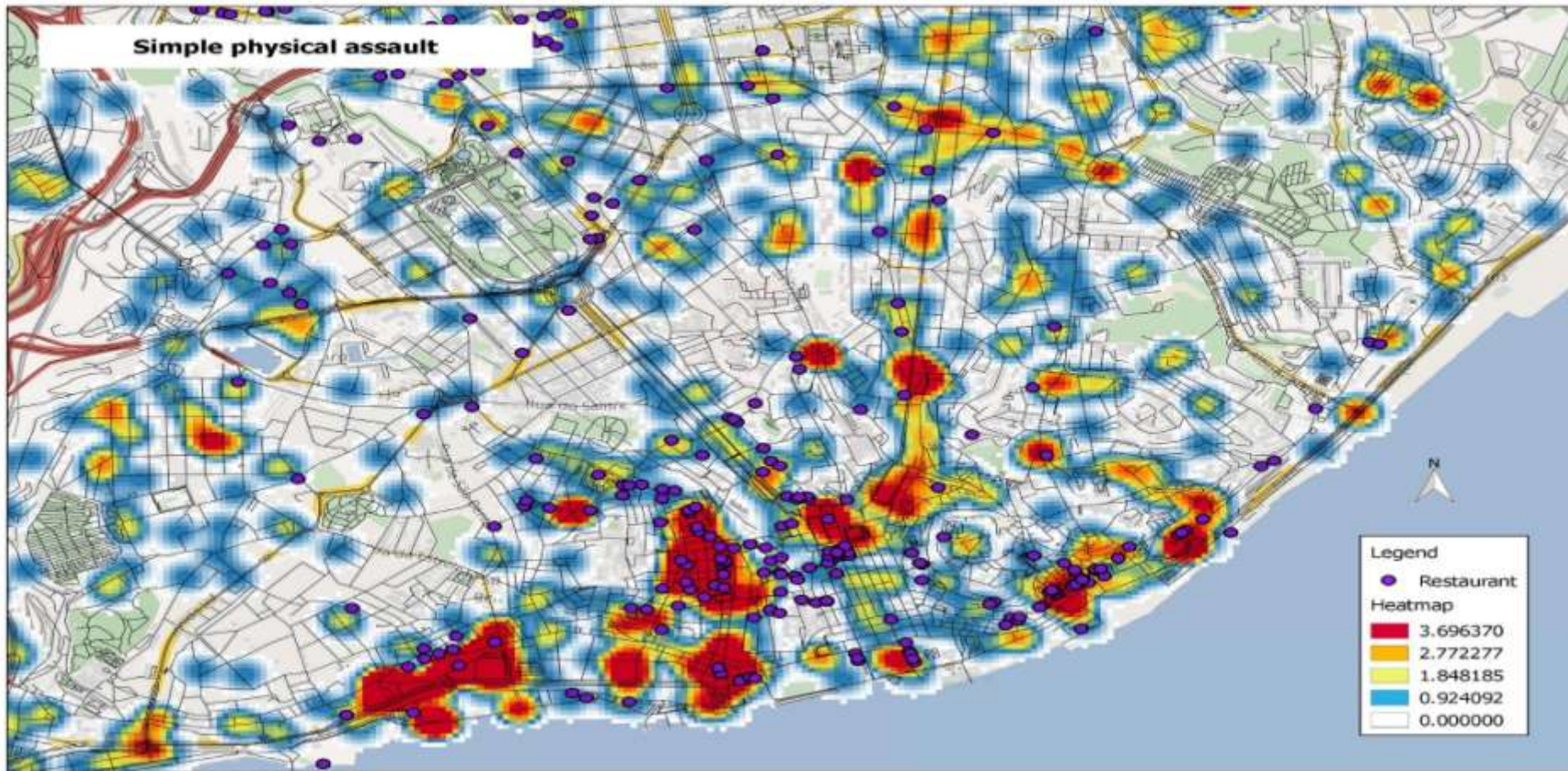


## Opportunity theft of unattended objects

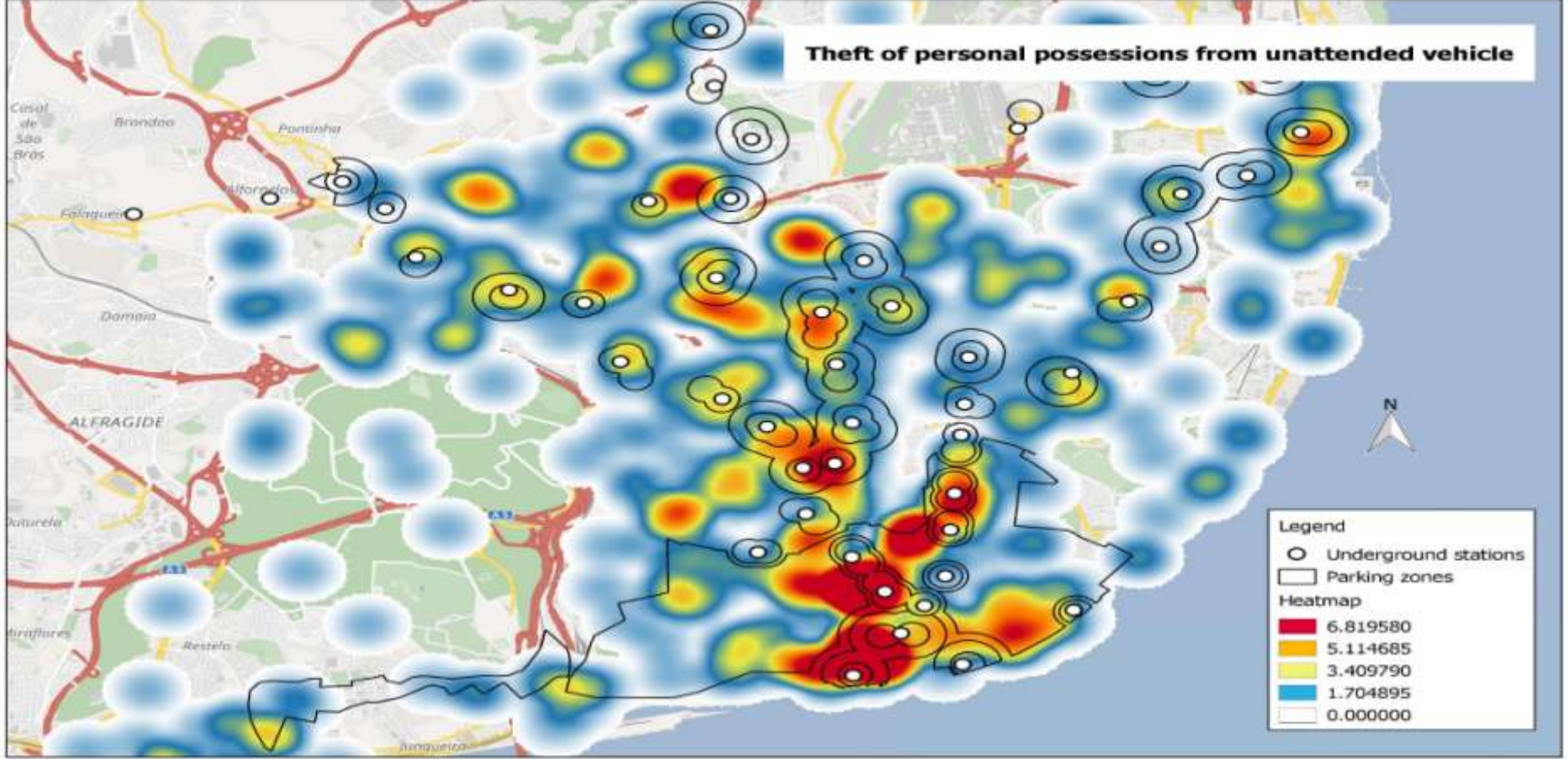


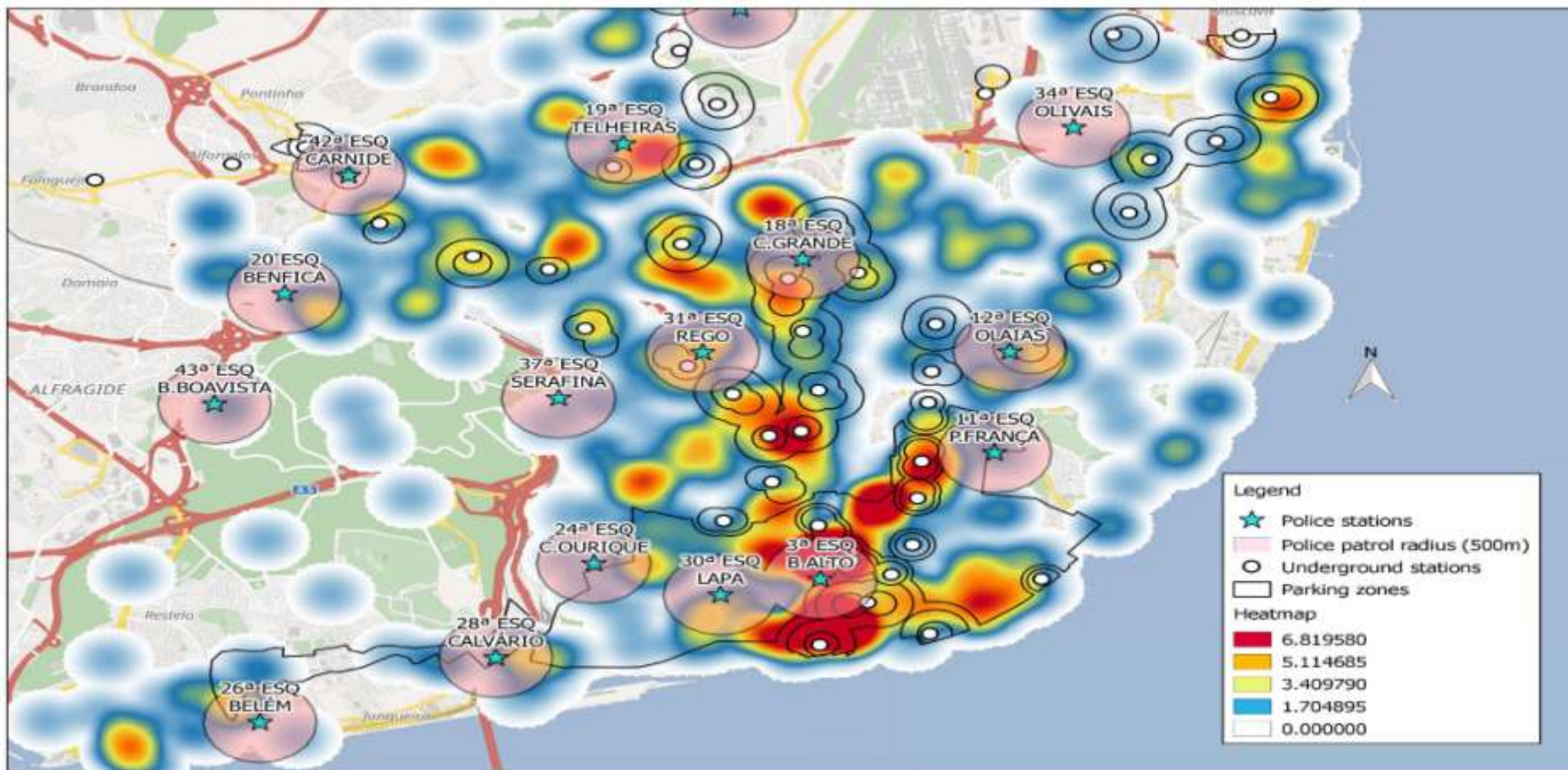


## Simple physical assault

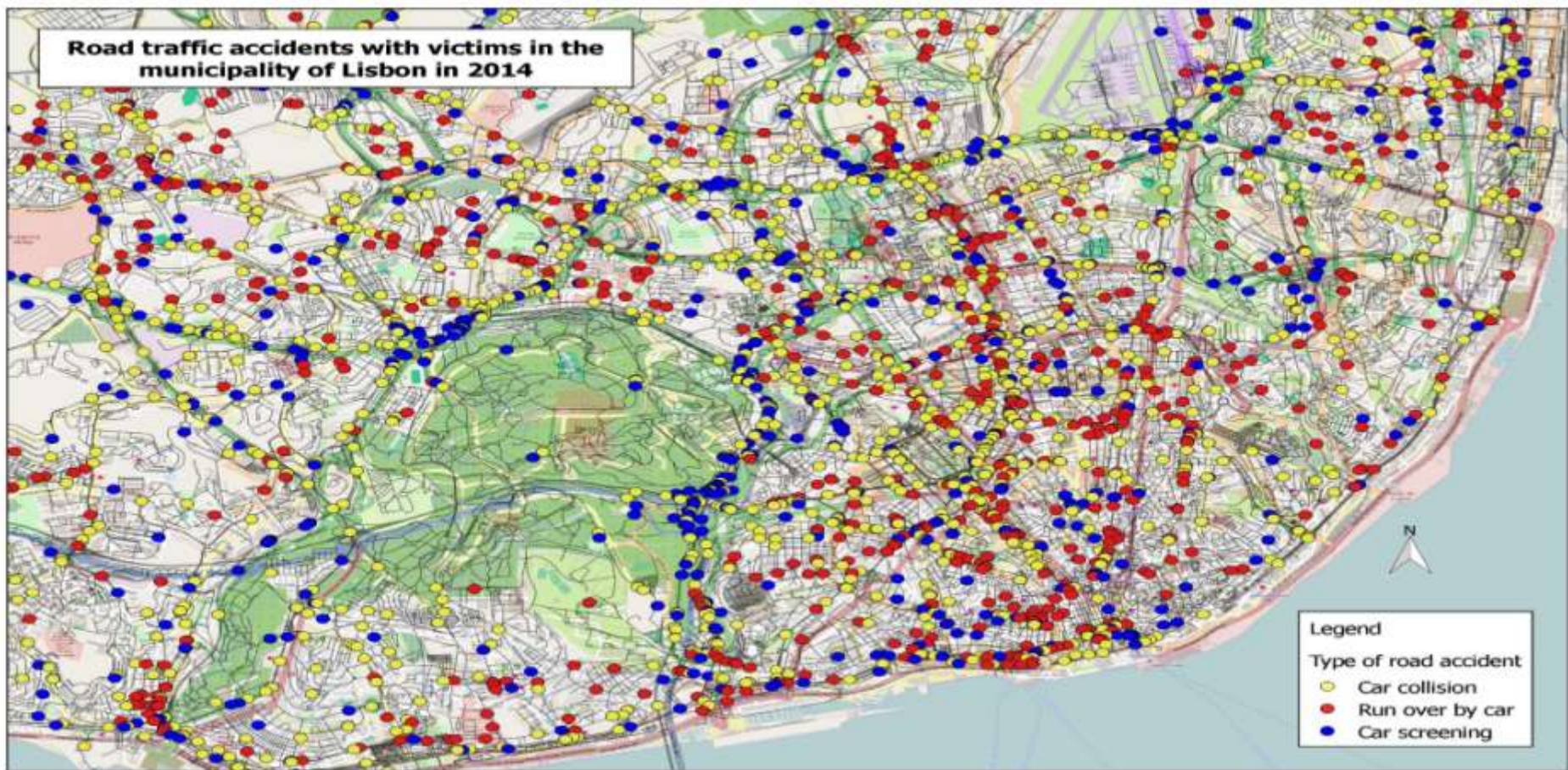


# Theft of personal possessions from unattended vehicle



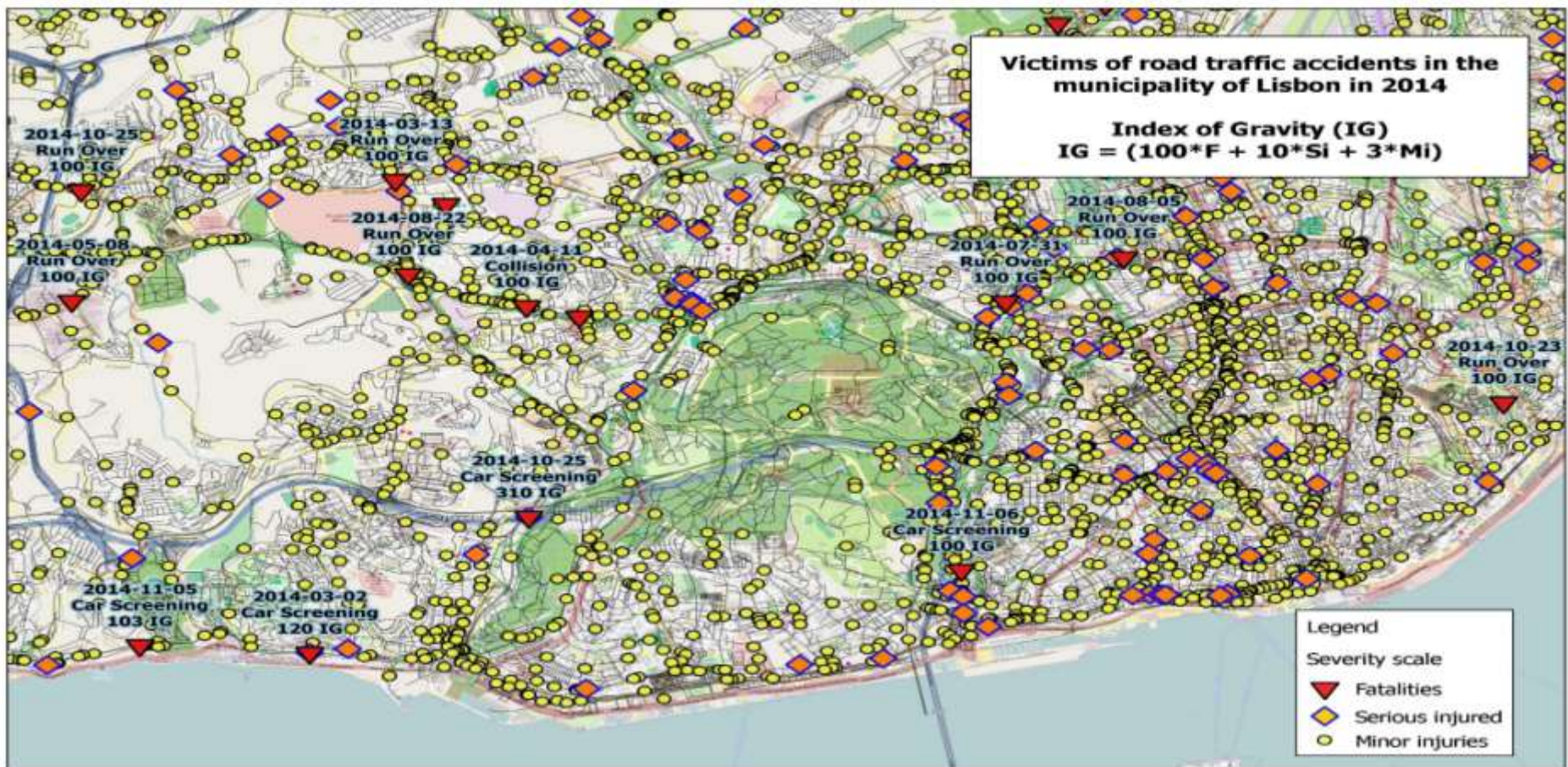


**Road traffic accidents with victims in the municipality of Lisbon in 2014**



# Victims of road traffic accidents in the municipality of Lisbon in 2014

**Index of Gravity (IG)**  
 $IG = (100 * F + 10 * Si + 3 * Mi)$



**Legend**

Severity scale

- Red Triangle: Fatalities
- Blue Diamond: Serious injured
- Yellow Circle: Minor injuries



In 2014 was created in Portugal the Earth Observation Working Group to promote the use of satellite imagery and satellite derived information from E.U. project COPERNICUS.

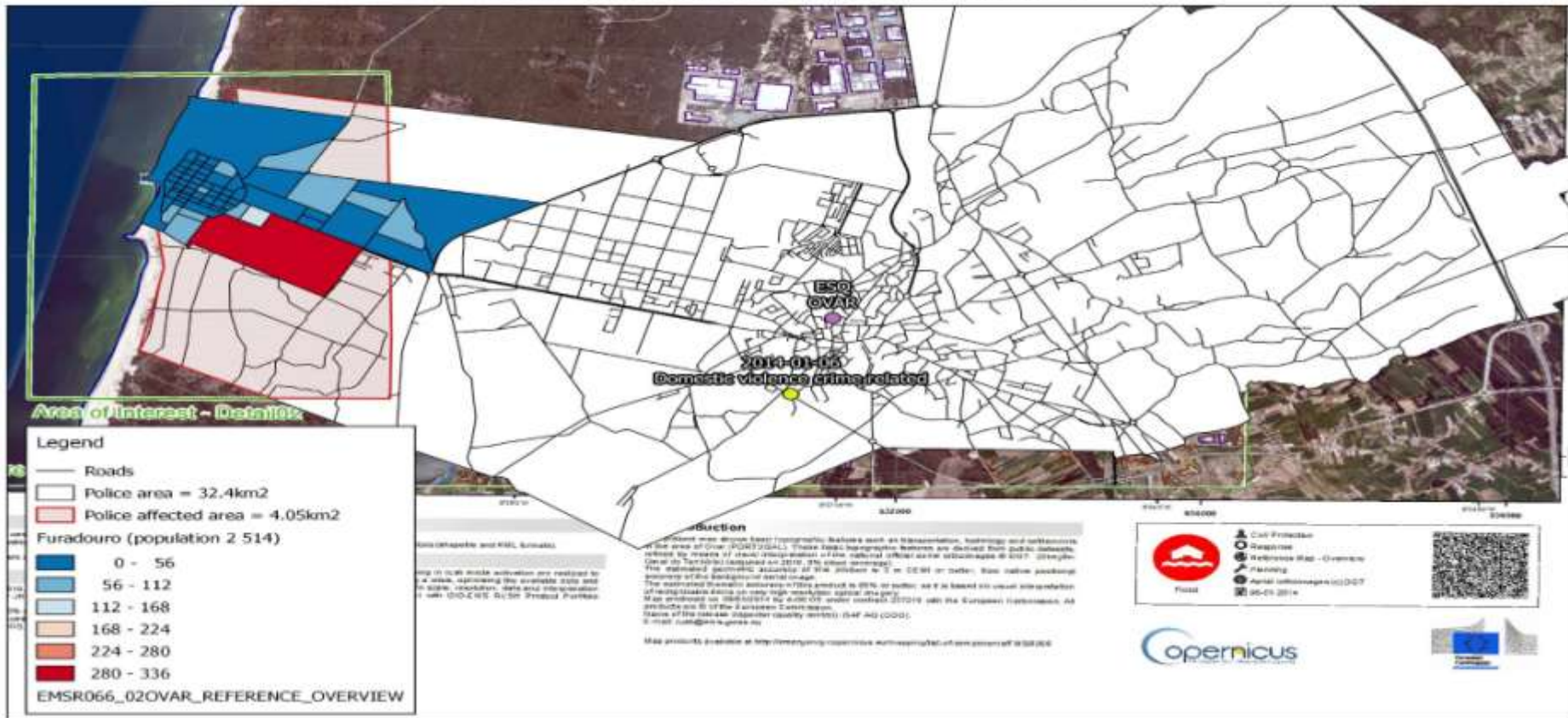
The Public Security Police is one of the 25 entities participating in this group for the use of satellite images and/or satellite derived information for the production of services or products.

On January the 6th 2014, a massive storm and heavy rainfalls brewed over the west coast of Portugal and waves reached as high as nine meters in some places, flooding villages, sweeping away vehicles and damaging infrastructure and beach structures.

(<http://www.copernicus.eu>)



# FLOOD IN 2014-01-06 IN MUNICIPALITY OF OVAR



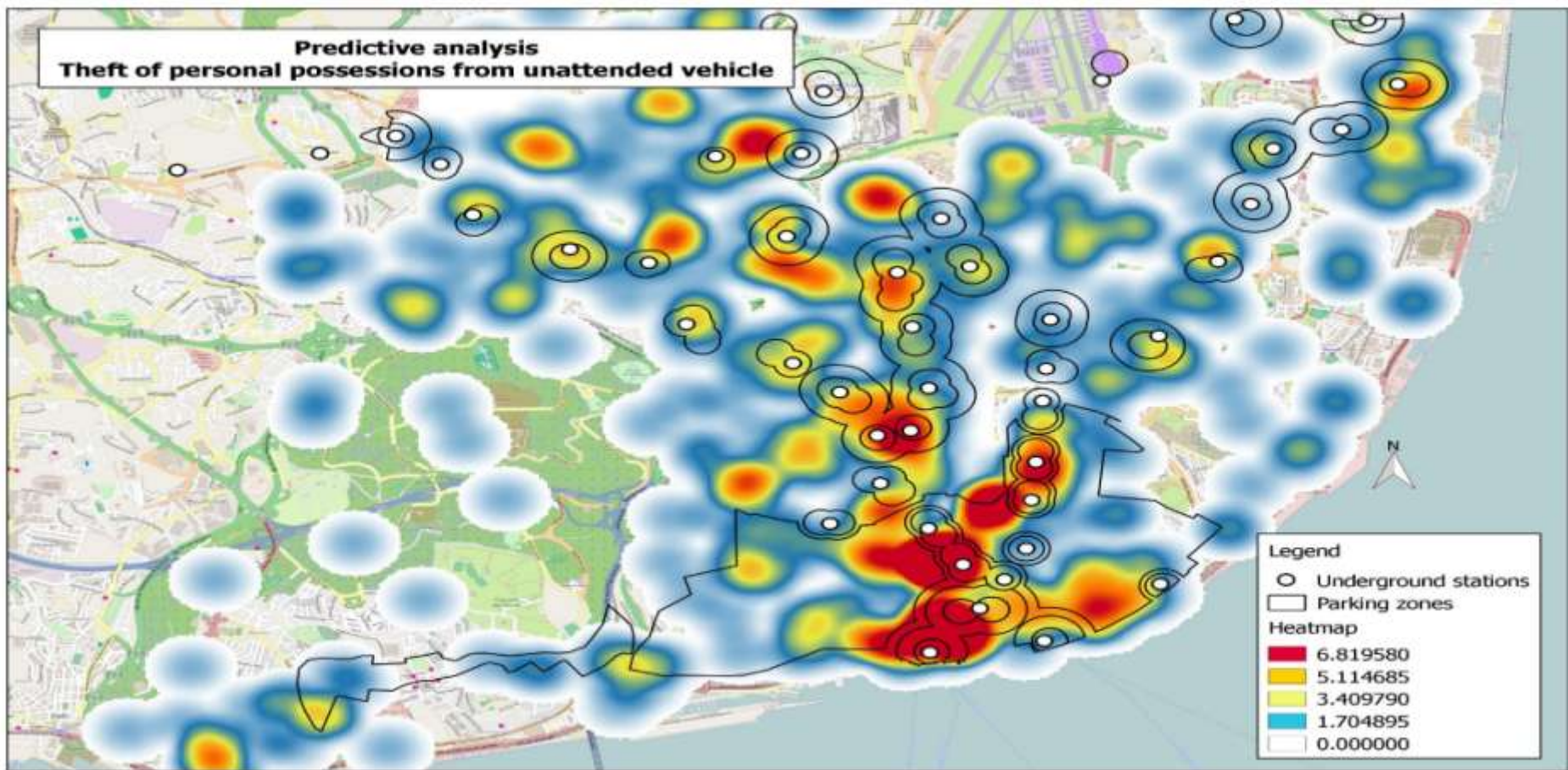


From a police perspective, **predictive crime mapping** can inform about deployment efforts helping to allocate patrols more efficiently and reduce response times.

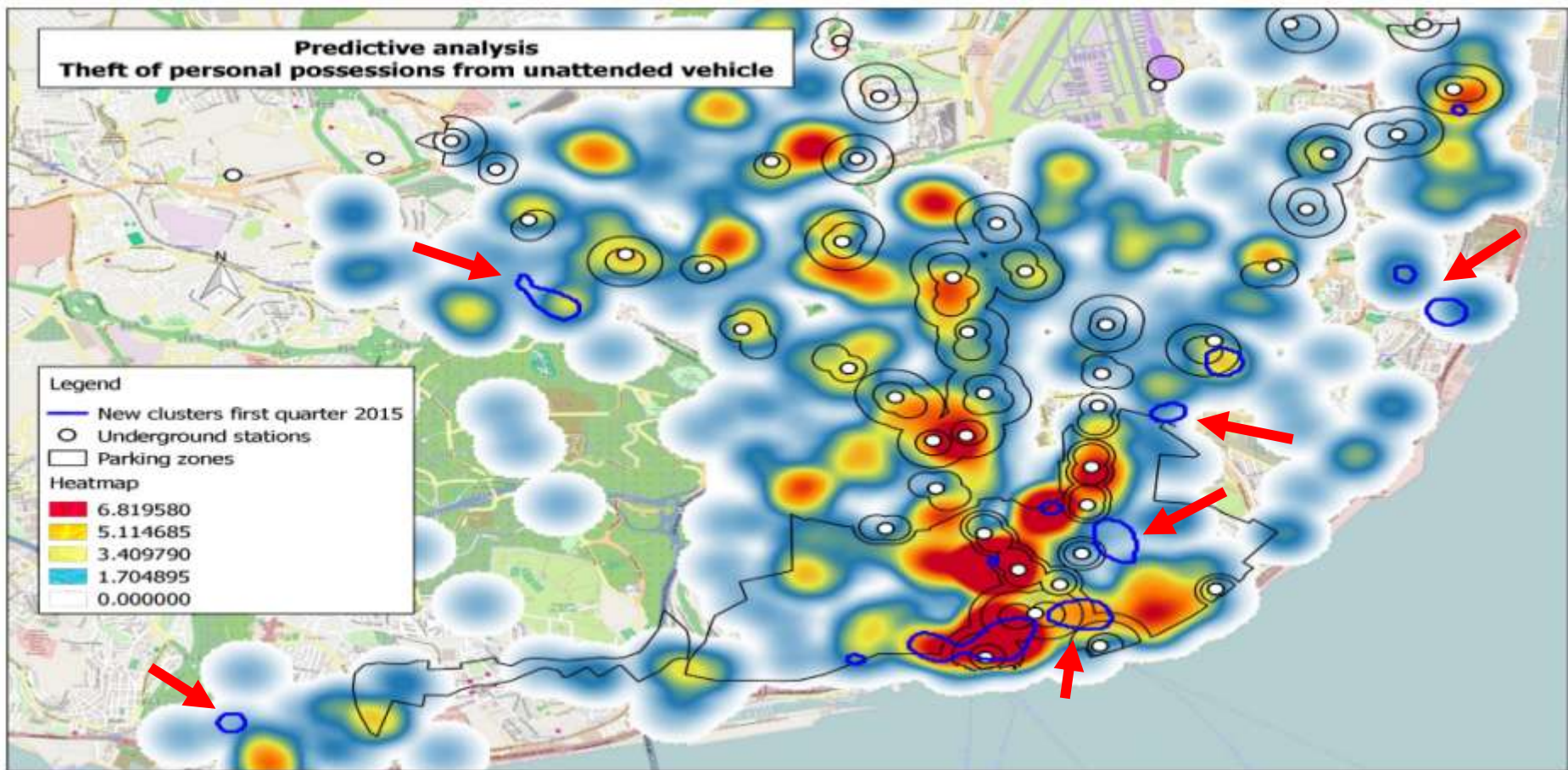
The most common method of "forecasting" crime activity is simply to assume that **the clusters of yesterday are the clusters of tomorrow.**



**Predictive analysis**  
**Theft of personal possessions from unattended vehicle**



**Predictive analysis**  
**Theft of personal possessions from unattended vehicle**



Crime analysis has been defined as involving **“the collection and analysis of data pertaining to a criminal incident, offender, and target”** (Canter, P. R. (2000).

(Canter, P. R. (2000). Using GIS in a command post center: The search for Joseph Palczynski.

Retrieved March 1, 2002, from the World Wide Web: <http://www.ojp.usdoj.gov/cmrc/conferences/Papers2000.html>.

# THANK YOU.

## THE END

