

February 2019

# LOCATION VIZ CARTO REPORT

DATA VISUALIZATION  
ASSIGNMENT N.3  
MBD O-1

## Group D

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# AirBnb in Madrid

## Introduction:

The present work is based on the "**Madrid listings**" dataset, which contains information about around 7500 AirBnb locations in Madrid (and 21 features to describe each of them). The objective is to utilize Location Intelligence in order to display spatial insights that will be useful to the viewers to understand the data in a clear way at first glimpse.



# 1. Concentration

This first layer is deployed to have a first general idea of the concentration of the properties across Madrid. An **hexagonal binning** has been used, in order to display **aggregate** values. As it can be seen from the legend, **lighter** colours represent areas with a **lower** concentration of properties and as the concentration **increases** the colour becomes **darker** (reaching a maximum of 919 for one bin) [Fig 1.1].

**Observations:** Not surprisingly, the concentration is rather low in the peripheral areas and it consistently increases while going towards the city center.



Fig. 1.1. - Concentration

## 2. Accommodation

In this second layer, it is possible to get deeper into the details of the properties. The variables which are visually encoded are number of people (visual element: color) and the size of the property (visual element: size of the circles). Hovering over the map the user can see a label displaying the info about the square feet and the n. of people of each of the properties. [Fig 2.1]

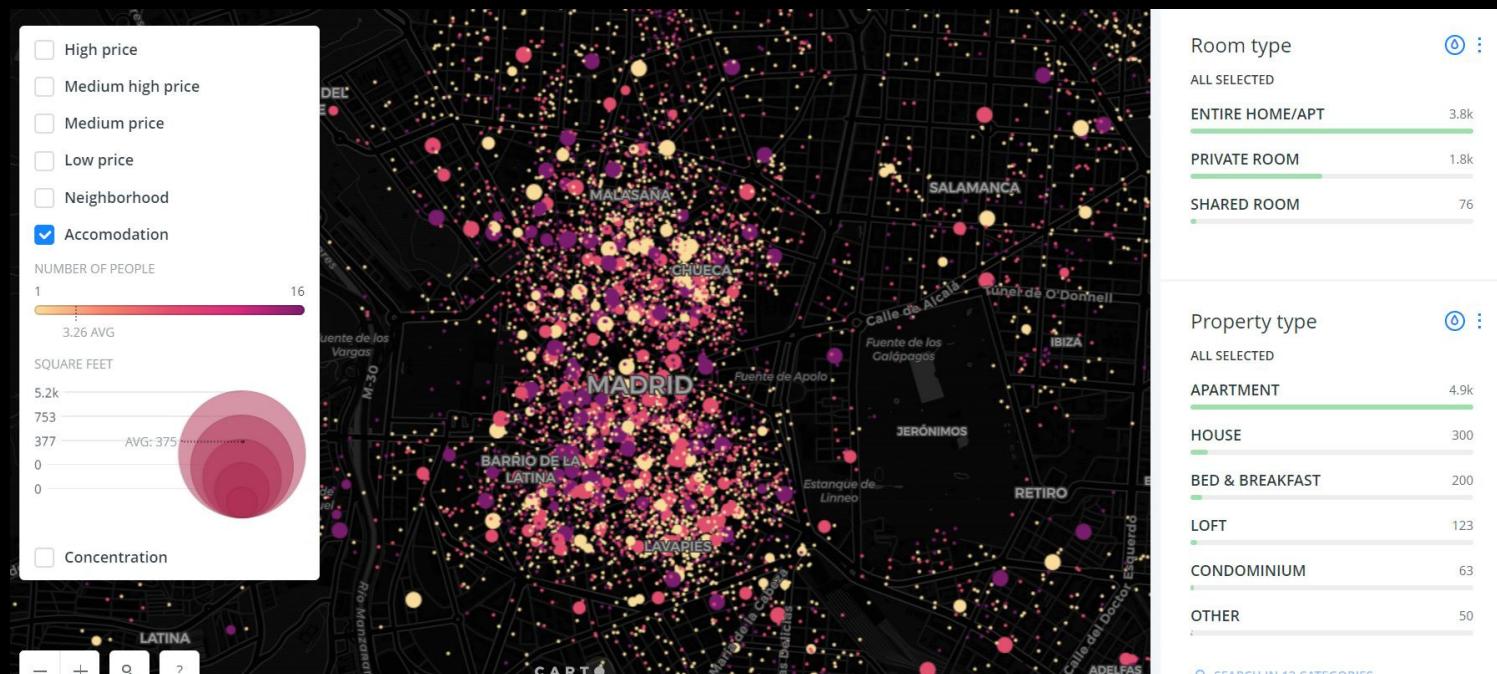


Fig. 2.1. - Square feet and n. of people

## 2.1. Widgets

On the other hand, the widgets filter the points according to the room type (entire home/apt, private room, shared room), property type (apartment/house/b&b/loft/condominium/other) and amenities (such as tv, wifi connection, air conditioning, elevator etc.)

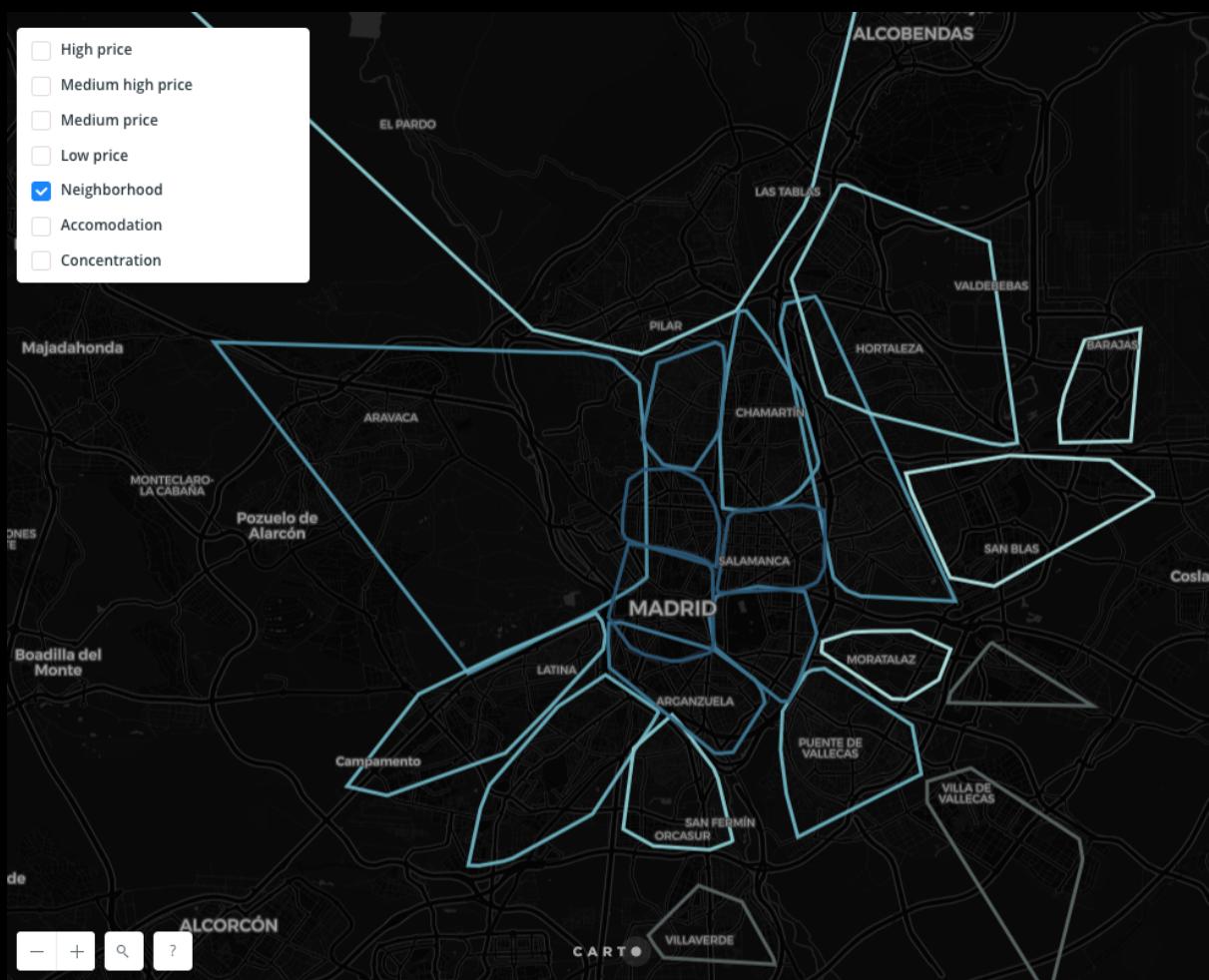
Through the widgets the user can easily filter out the properties according to the various preferences (for example: "private room" in a "house" or "condominium") [Fig 2.2].



Fig. 2.2. - Example of filtering

# 3. Neighborhood

Looking for a specific area to stay in your trip? Being able to select between different regions, neighborhoods and sectors is important according to the objectives of your trip. This may have an impact on transportation costs, entertainment and activities the area has to offer, or even security related issues. The neighborhood layer allows the user to view the different neighborhoods available for the booking. This layer presents several convex **polygons** that show a representative perimeter of each of them. Polygons with a **darker** outline represent neighborhoods with a higher number of accommodations to offer. Carto allows to manually control the levels of opacity of the background and outline, so that it makes it easier or mix and match with other layers [Fig 3.1].



**Fig. 3.1. - Polygons of neighborhoods based on n. of properties**

# 4. Price

Price range is one of the most important variables when it comes to booking a trip. Four different layers help the users navigate through different **price sets** that help them make the decision that fits their needs and budget. The visualization helps identify the areas or sectors with high or low prices, or pick a price by location convenience. As we can see in the legend, prices were split in the following intervals:

- High price
  - 🏡 \$120+
- Medium high price
  - 🏡 \$80 - \$120
- Medium price
  - 🏡 \$30 - \$80
- Low price
  - 🏡 \$0 - \$30

The price variable was set as a **target column** and later filtered by value (in this case, each of the intervals that was needed). Different style was applied to each of the layers as shown above: **blue** for high prices, **yellow** for medium high prices, **green** for medium prices, and **purple** for low prices. In addition, hoovering is added in order for the user to be able to see more details about the location and the price of interest (n. of bathrooms, bedrooms, review score).

# Prices: All

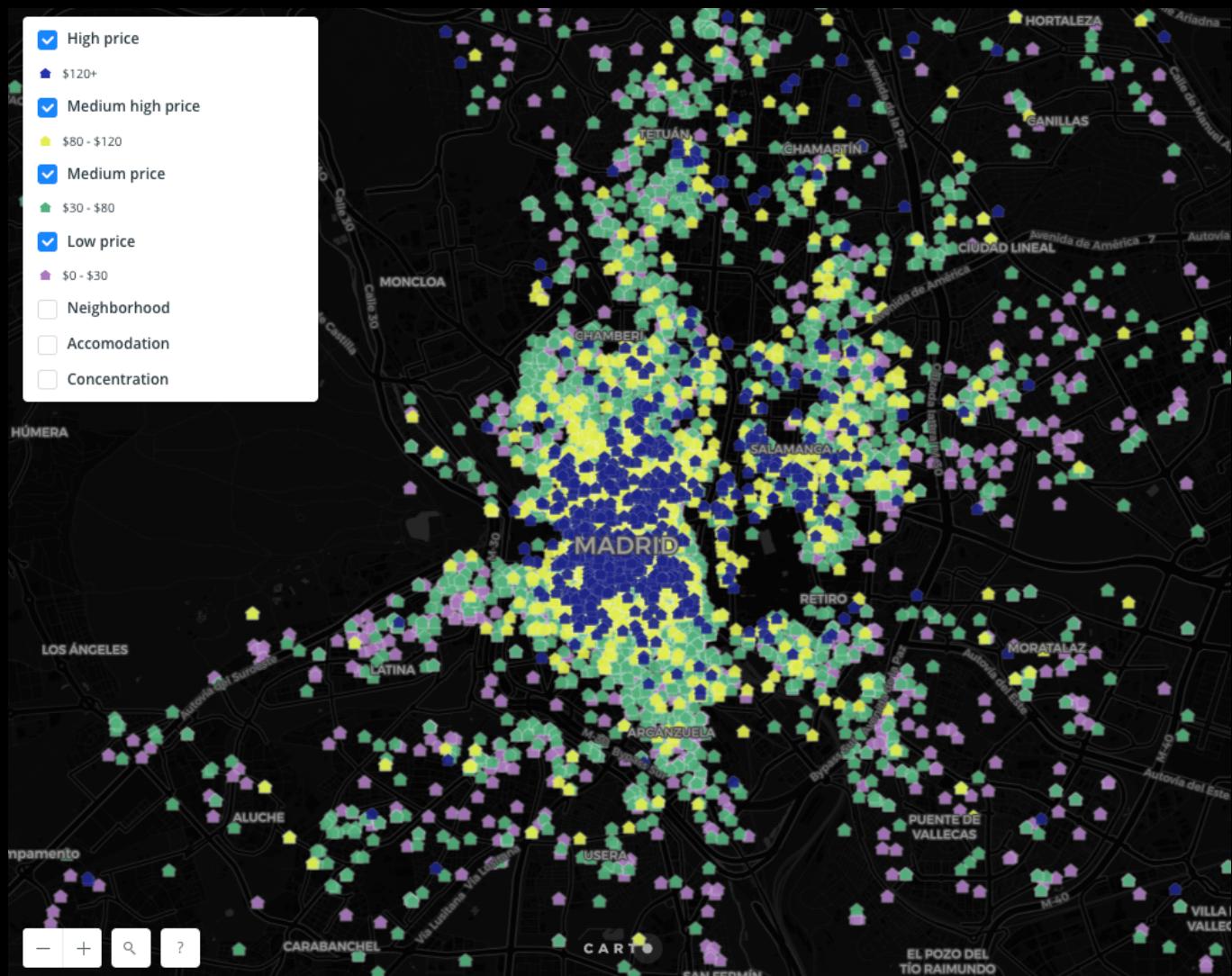


Fig. 4.1. - Prices: All categories

# Low prices

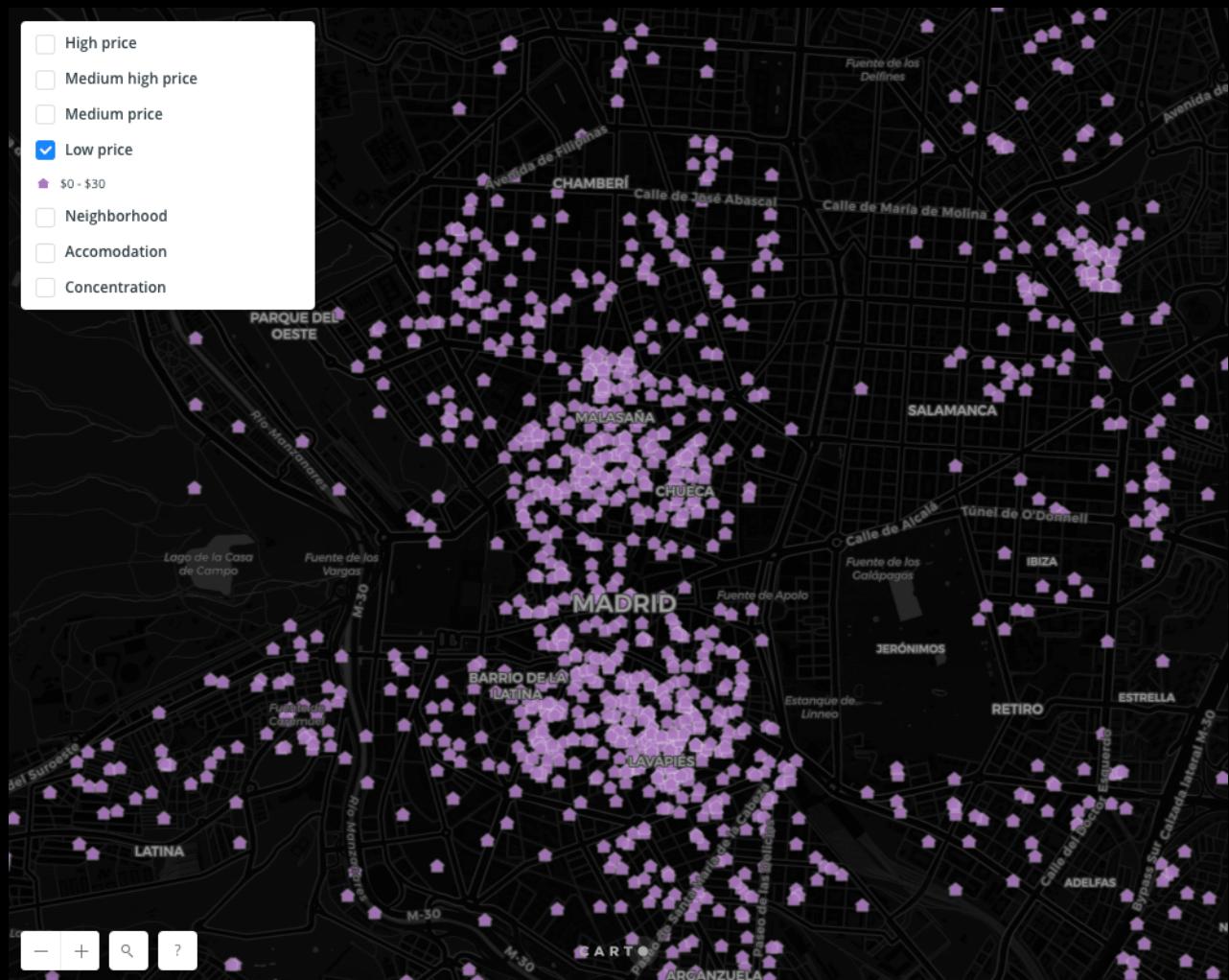
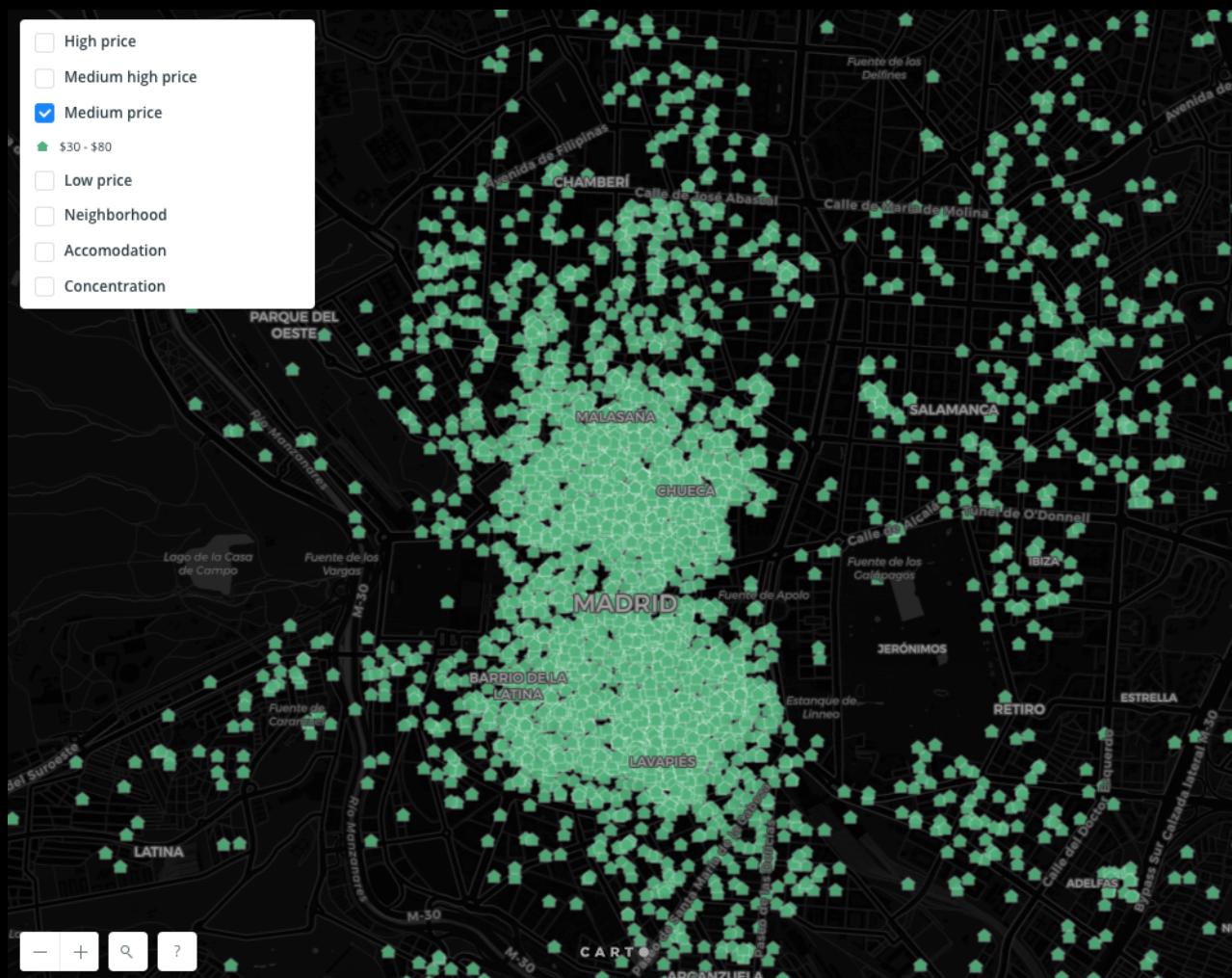


Fig. 4.2. - Low price layer

# Medium prices



**Fig. 4.3. - Medium price layer**

# Medium high prices

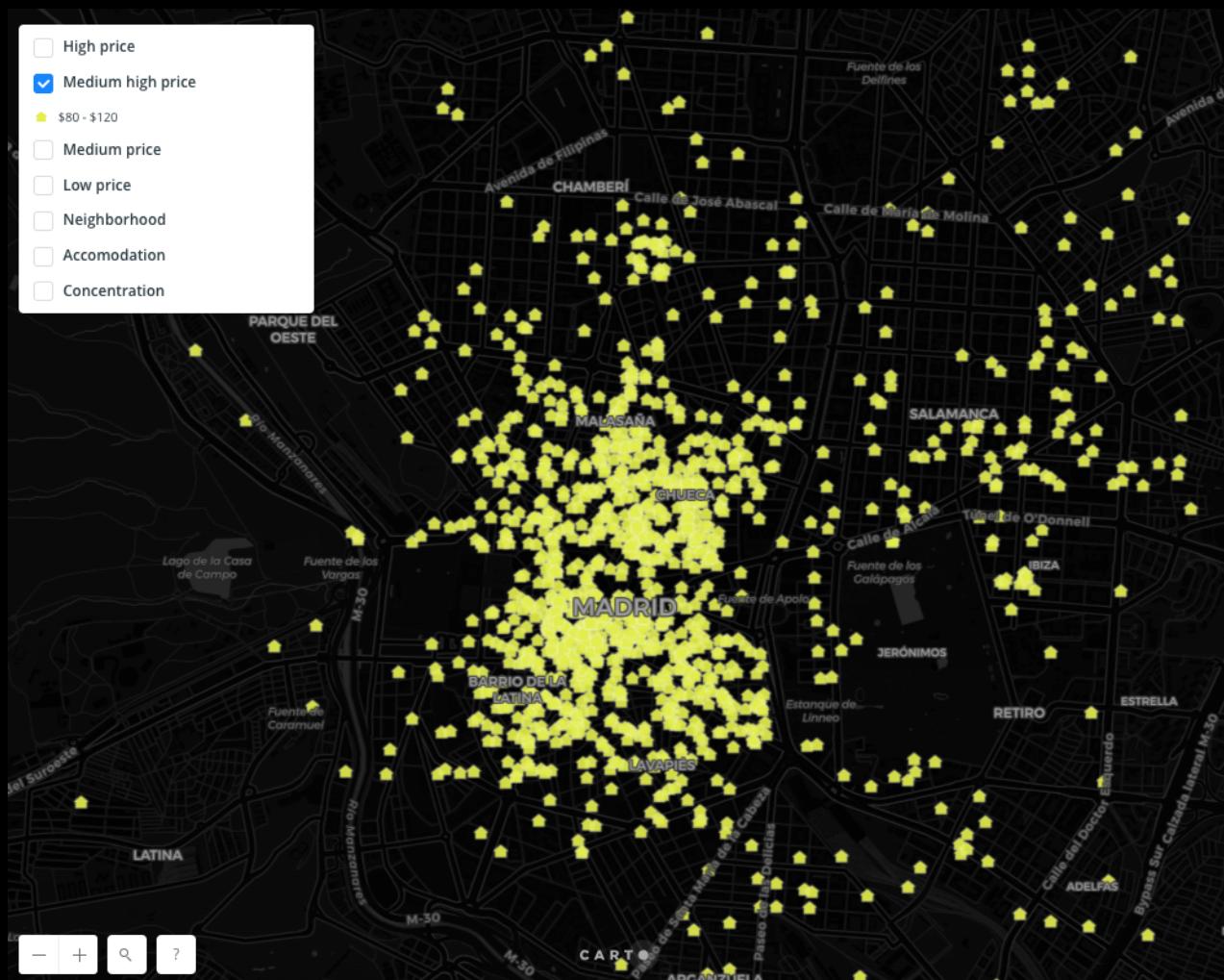


Fig. 4.4. - Medium high price layer

# High prices

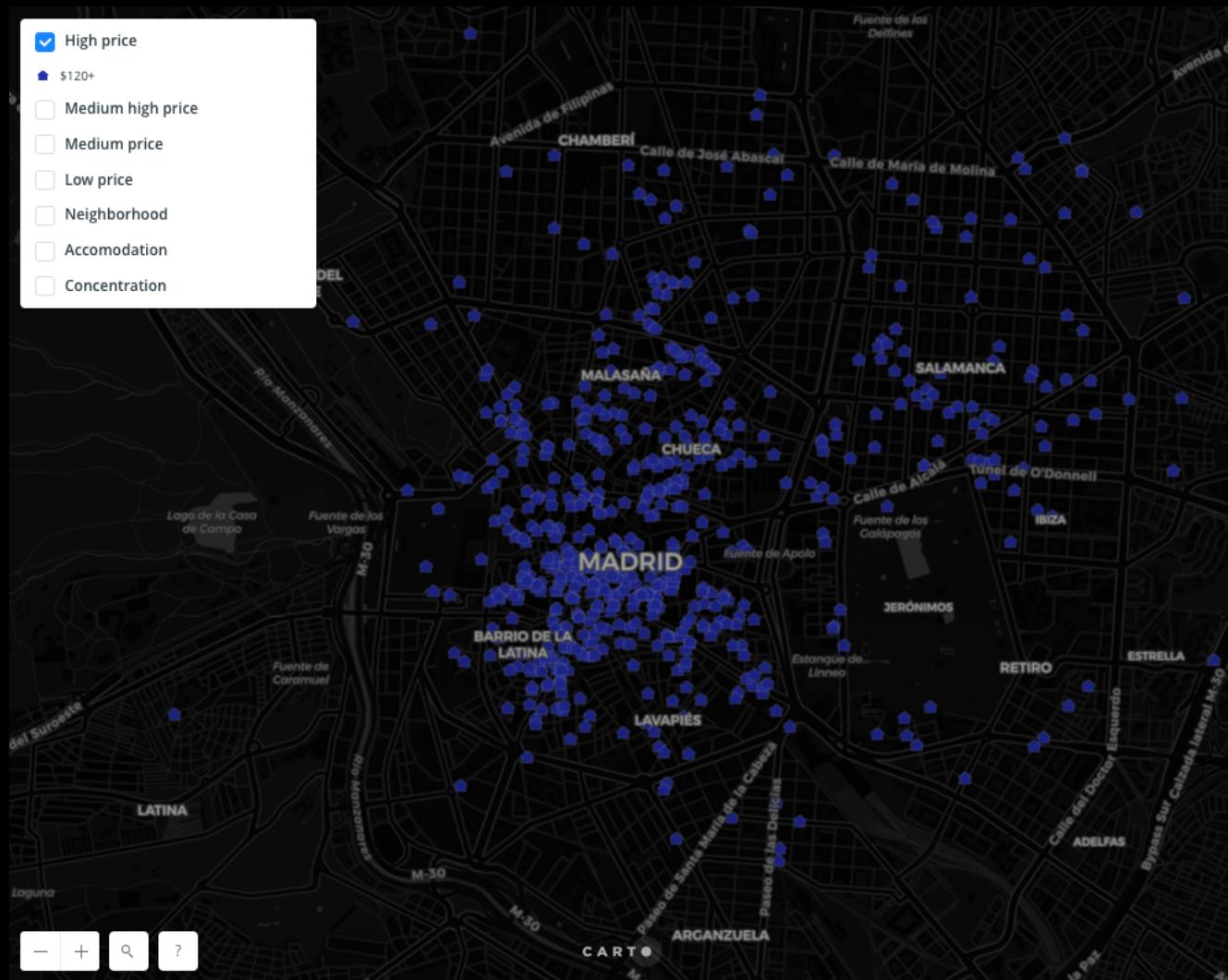


Fig 4.5 - High prices layer

# 5. Real Life Example

**Jessica** is going to Madrid to attend the IE Technology Summit next week. She checks out the Carto visualization in order to make a decision on where to stay. Her budget is around **100\$** per night. She enjoys **calm residential areas**.

The important speaker series start only around 11 AM, so she would rather pay a bit less in accommodation and use public transportation. She is looking for a **one-bedroom** apartment with **bathroom**.



# Real Life Example

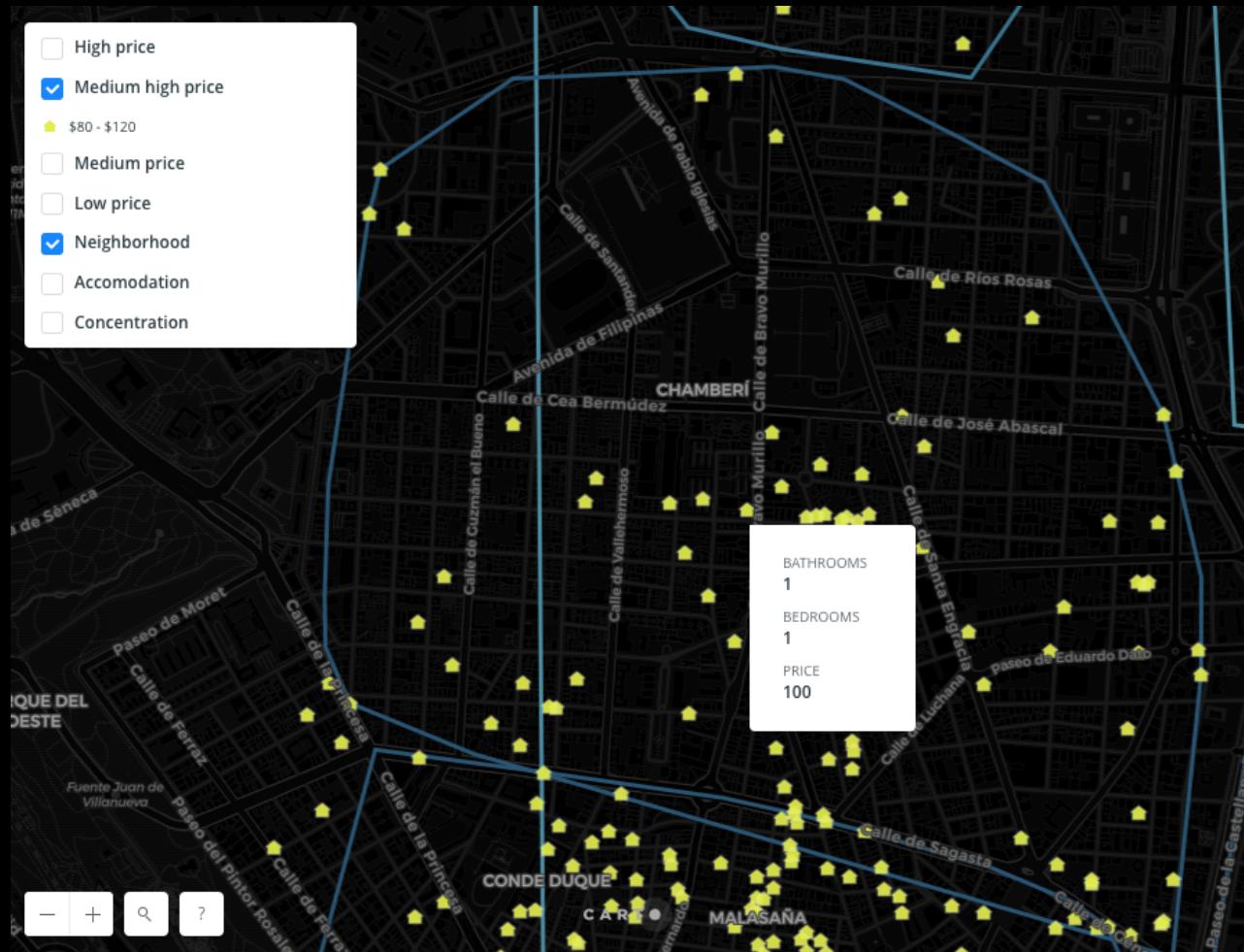


Fig 5.1- Filtered map

# Link to the visualization:

**<https://francescamanoni.carto.com/builder/93c5a66a-22fc-413d-b9ad-98eeb5316baf/embed>**