Analysis of Neighborhood

A new italian restaurant in Pairs

Business Case

We tried to find out

- **locations that are not already crowded with restaurants**.
- **Areas with no Italian restaurants in vicinity**.
- Place availables as close to city center as possible

Data

To answer our question we used :

- Google Maps API Reverse geocoding
- Foursquare API
- GOOGLE Maps API geocoding

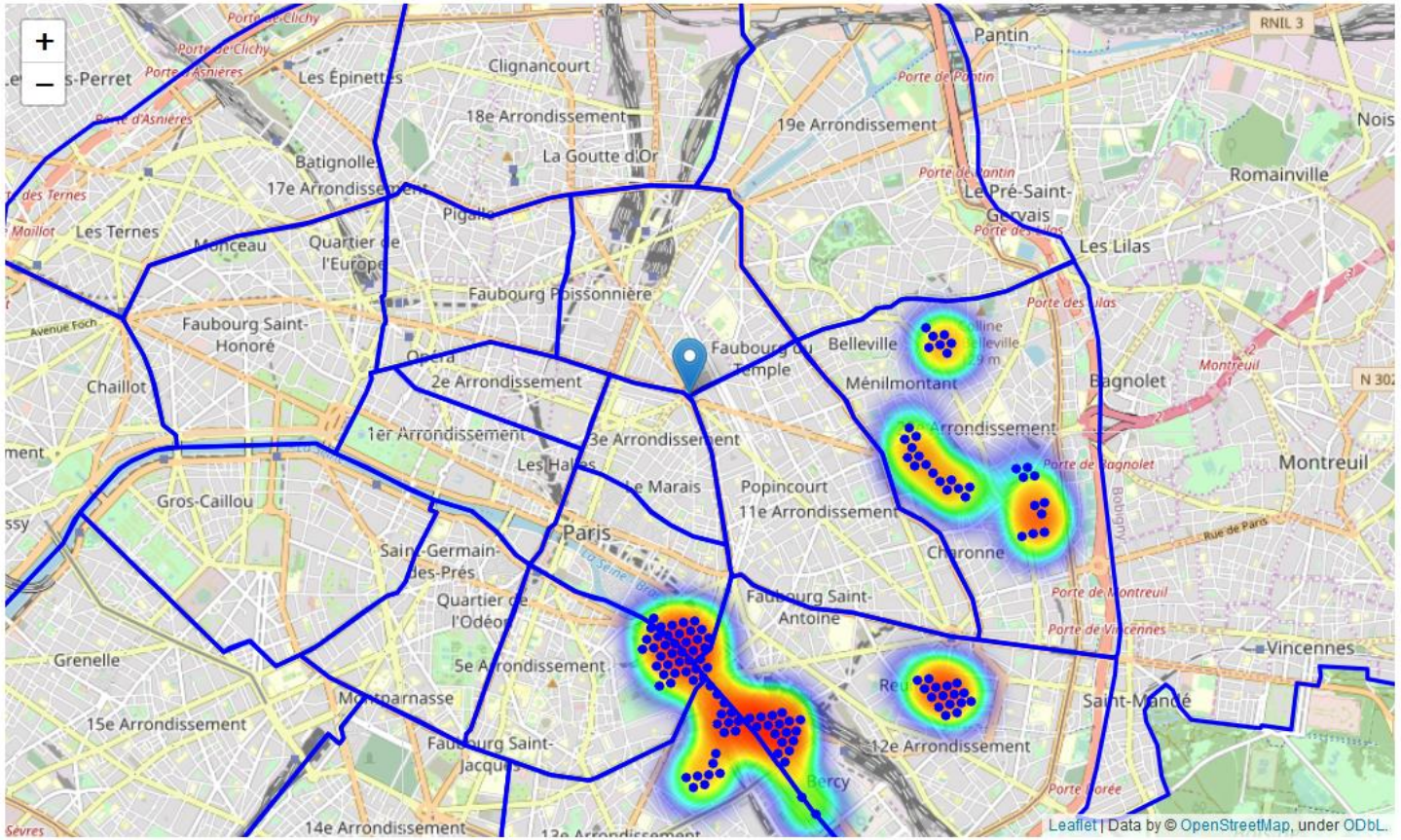
In order to get geo information and venues informations

Methodology

1. We have collected the required **data: location and type (category) of every restaurant within 6km from Paris center** (Place de la République). We have also **identified Italian restaurants** (according to Foursquare categorization).
2. We used **heatmaps** to identify a few promising areas close to center with low number of restaurants in general (*and* no Italian restaurants in vicinity) and focus our attention on those areas.
3. We created **clusters of locations that meet some basic requirements** established in discussion with stakeholders: we took into consideration locations with **no more than two restaurants in radius of 250 meters**, and we wanted locations **without Italian restaurants in radius of 400 meters**.
4. We created clusters (using **k-means clustering**) of those locations to identify general zones / neighborhoods / addresses which should be a starting point for final 'street level' exploration and search for optimal venue location by stakeholders.

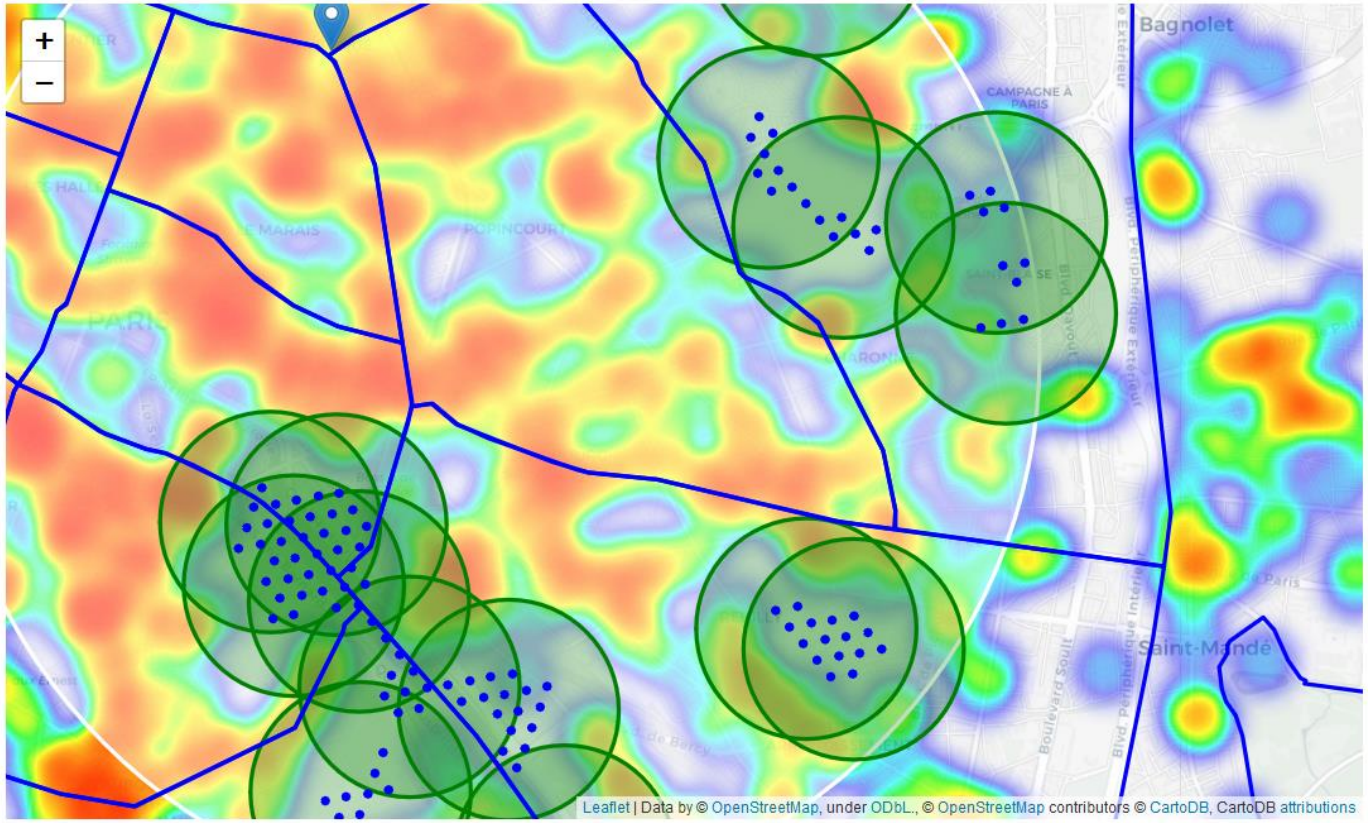
Analysis & Results

Places without high density of italian restaurant



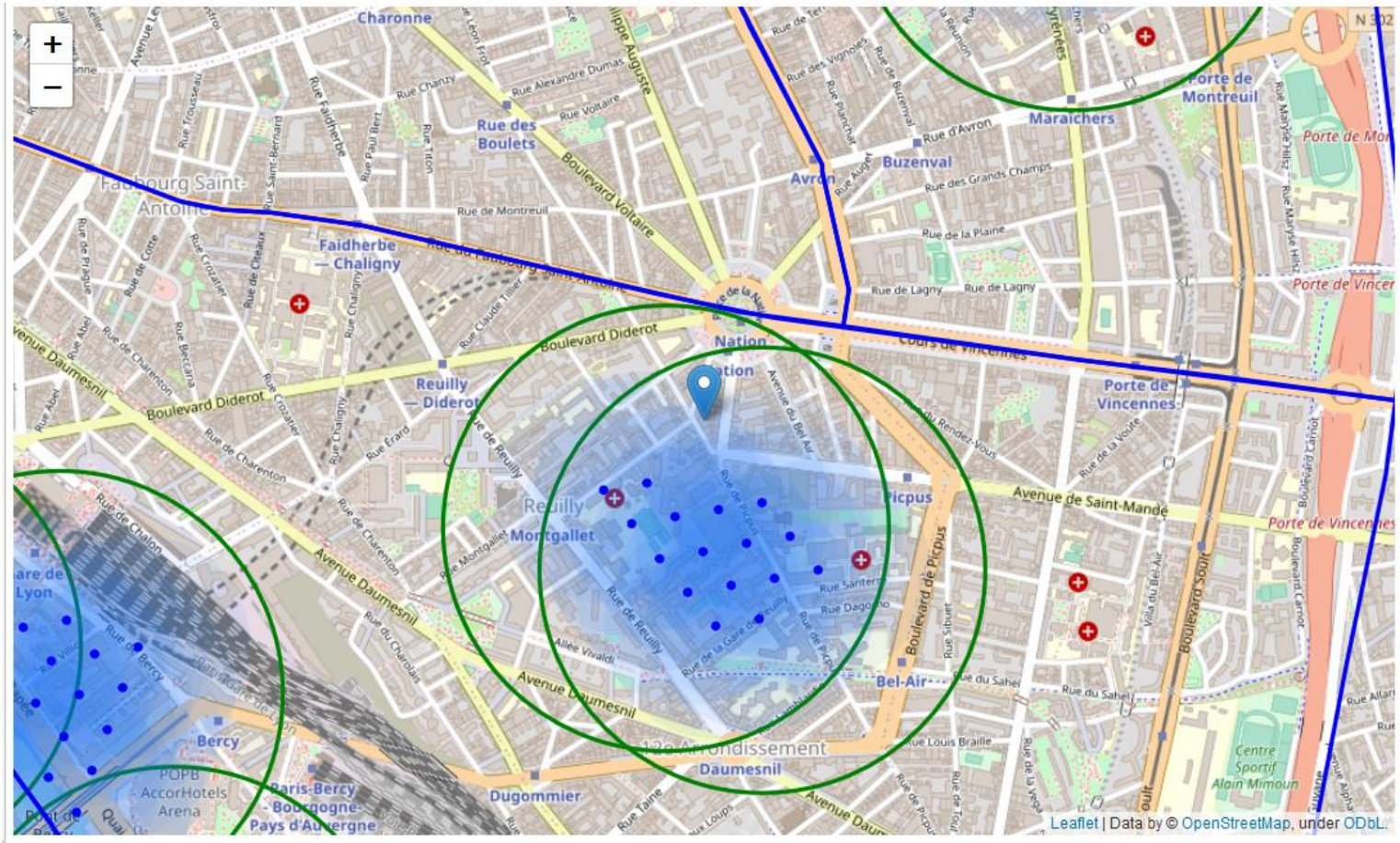
Analysis & Results

Clusters thanks to K-Means



Analysis & Results

Good places in Picpus



Discussion

- Result of all this is 15 zones containing largest number of potential new restaurant locations based on number of and distance to existing venues - both restaurants in general and Italian restaurants particularly.
- This, of course, does not imply that those zones are actually optimal locations for a new restaurant! Purpose of this analysis was to only provide info on areas close to Paris center but not crowded with existing restaurants (particularly Italian) - it is entirely possible that there is a very good reason for small number of restaurants in any of those areas, reasons which would make them unsuitable for a new restaurant regardless of lack of competition in the area.
- Recommended zones should therefore be considered only as a starting point for more detailed analysis which could eventually result in location which has not only no nearby competition but also other factors taken into account and all other relevant conditions met.

Conclusion

- Clustering of those locations was then performed in order to create major zones of interest (containing greatest number of potential locations) and addresses of those zone centers were created to be used as starting points for final exploration by stakeholders.
- Final decission on optimal restaurant location will be made by stakeholders based on specific characteristics of neighborhoods and locations in every recommended zone, taking into consideration additional factors like attractiveness of each location (proximity to park or water), levels of noise / proximity to major roads, real estate availability, prices, social and economic dynamics of every neighborhood etc.