

A decorative graphic on the left side of the slide. It consists of a blue parallelogram and a light green parallelogram, both tilted at an angle. The blue shape is in the foreground, and the green shape is partially behind it. They are set against a dark blue background with faint, lighter blue diagonal stripes.

Investment options in Warsaw

Problem_Background

Warsaw is the capital of Poland, fast growing business centre in Central Europe. Disposable income in the City is much higher than in other Polish regions and now it is even above European Union average. It attracts a lot of investors, new business district is emerging and more and more houses are being built in residential areas.

This generates a lot of opportunities for new businesses as long as many challenges from the city authorities to keep the capital growth sustainable.



Problem Description

Poles spend relatively low on away from home consumption. There is a lower number of restaurants or bars than in neighbouring countries, and that generates an opportunity for businesses. An investor wants to invest in new venue in Warsaw. He needs to decide that type of outlet he will open and in which neighbourhood.

He asked me to advise them about the above business questions:

- How many outlets they should open
- Where they should locate them





Data collection and success criteria

I collected data Warsaw districts - their characteristics and business potential. Also will explore Foursquare API data in order to understand the competitive environment. Crucial will be selecting decision criteria and finally decide on what should be the main factor of choosing location and number of outlets.

Choosing any potential locations based on specified criteria. The criteria are:

- a. Small / large number of competitors
- b. And all other data that will be available after exploration phase



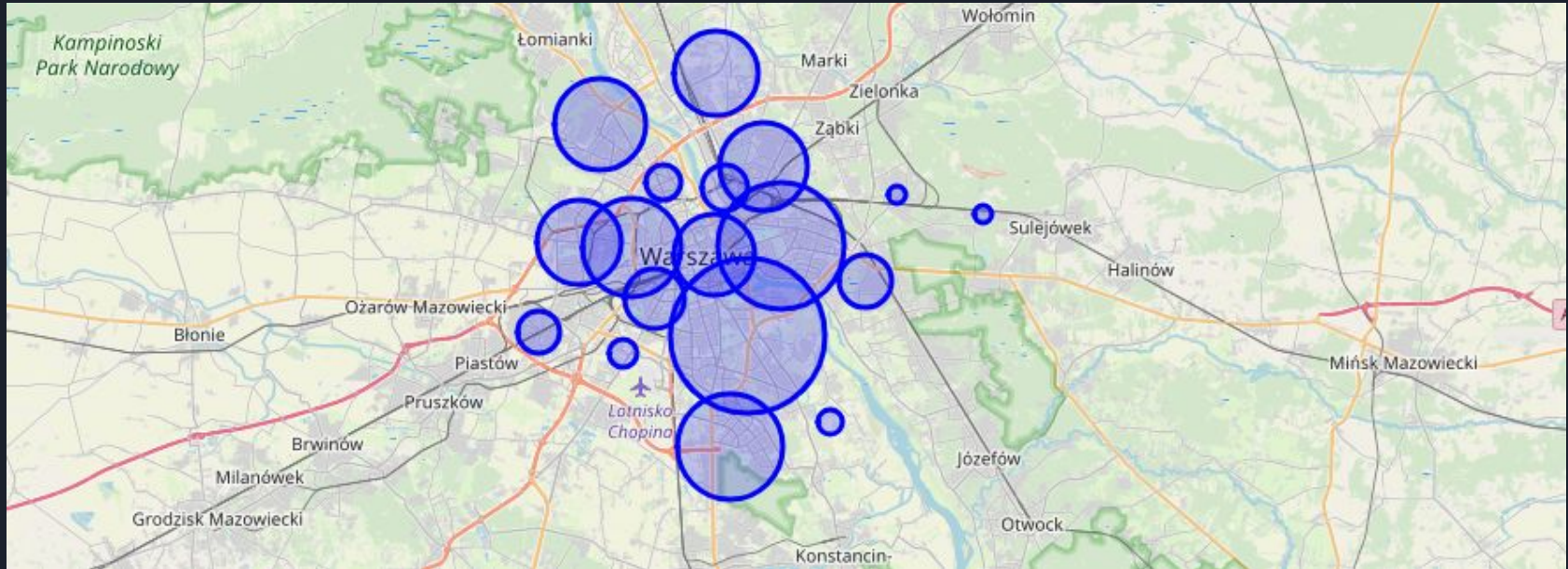


The data


The data used come from:

1. Wikipedia definition of 18 neighbourhoods
2. Foursquare API data - this dataset helped me understand the competitive environment and find the best location for venues. It will also tell me what type of outlets are in each of the neighbourhoods. The question then is if we want to use the potential of the district or bring something new to competitive environment
3. Neighbourhoods with their potential (total number of inhabitants) are shown on Map

Warsaw neighbourhoods



Bubble size - inhabitants in neighbourhood



Investment option 1 - Have the best outlet type in every district

approach was solved by selecting the most popular (frequent) venue type in Warsaw and comparing it with frequency in each of the districts. The ratio shown the potential of investment. The best options are:

----Mokotów----


	venue	freq	freqtot	ratio
0	Supermarket	0.01	0.04	3.56

----Praga-Północ----

	venue	freq	freqtot	ratio
0	Supermarket	0.01	0.04	3.63

----Ursynów----

	venue	freq	freqtot	ratio
0	Café	0.02	0.07	3.1



Investment option 2 - Have only one type and choose which districts to enter

The most popular venue in Warsaw is: Café

And the list of neighbourhoods that do not have Cafe in the list of top venues is below:

Borough	Inhabitants	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue
Ursynów	150273	Convenience Store	Chinese Restaurant	Supermarket
Targówek	123941	Supermarket	Plaza	Market
Białoleka	119374	Flower Shop	Asian Restaurant	Outdoors & Recreation
Wawer	75991	Hotel	Bus Station	Bakery
Ursus	59261	Supermarket	Italian Restaurant	Hotel
Włochy	41929	Supermarket	Hotel	Turkish Restaurant
Wilanów	35511	Restaurant	Golf Course	Gym / Fitness Center
Wesoła	25106	Train Station	Forest	Neighborhood

Final Recommendations

Let's assume we want to start with 3 venues,
there are 2 potential options for investment:

1. **Investing in Supermarket in Mokotów and Praga Północ with additional investment in Cafe in Ursynów**
or
2. **Investing in Cafe in Ursynów, Targówek and Białoleka**

