MOVING TO MADRID OR TO BARCELONA?

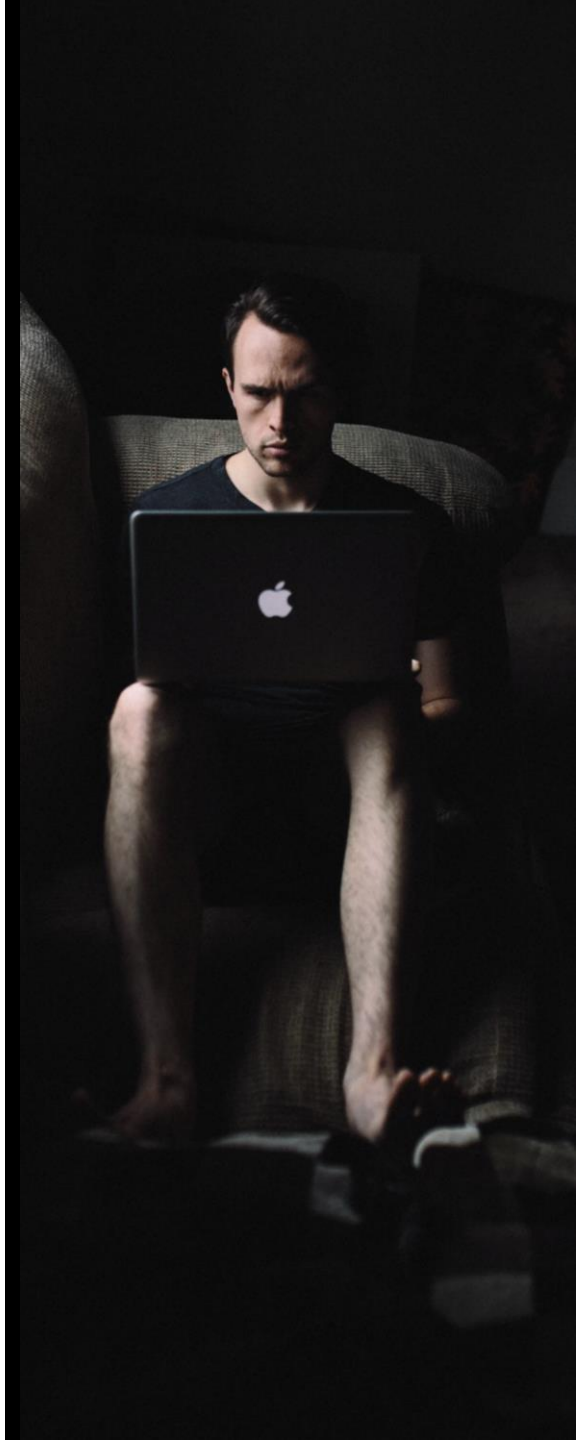
A DATA-DRIVEN APPROACH

thetamize
be smart with data

DECIDING WHERE TO MOVE

MUST BE A DATA-DRIVEN DECISSION

- Madrid and Barcelona are the main destination cities for both national people willing to progress and foreigners moving to Spain
- It is always easier to remotely find your dream job than regular places you´ll need to make use of once the working time is over
- Everybody has their own needs, so we will focus on a given ‘persona’ profile very likely to be a national and/or international migrant
- This ‘persona’ profile consists of young people without children, likely with pets, and lovers of the natural life
- These people have a bigger than average level of spending, which is a driver for local entities to attract such kind of talent too



thetamize
be smart with data

WHERE THE DATA COMES FROM

AND HOW NEEDS TO BE PREPARED

- Wikipedia provides Madrid and Barcelona neighborhoods structure, Geohack does so with their geographical coordinates
- All 131 neighborhoods in Madrid and all 73 in Barcelona considered
- Foursquare API provides relevant venues per neighborhood
- INE databases provide average size of houses per neighborhood, and idealista.com the average renting per m^2 per neighborhood
- Above together can define the average renting price per neighborhood
- Glassdoor provides average year salaries per city and position
- Multiple venues per city and neighborhood where de-duped, grouped and compared

thetamize
be smart with data

FUNNELING PROCESSES SOMETIMES HELP

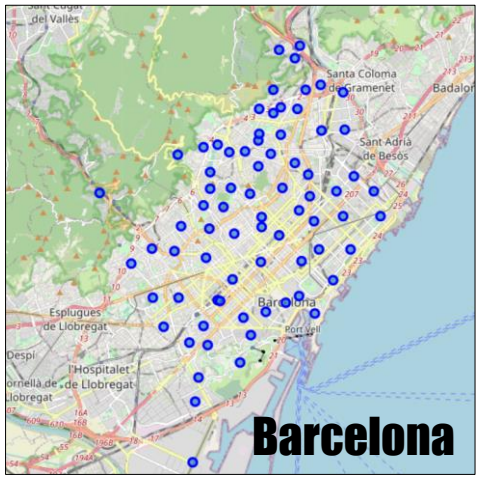
ONCE DATA IS CLEANED AND PREPARED

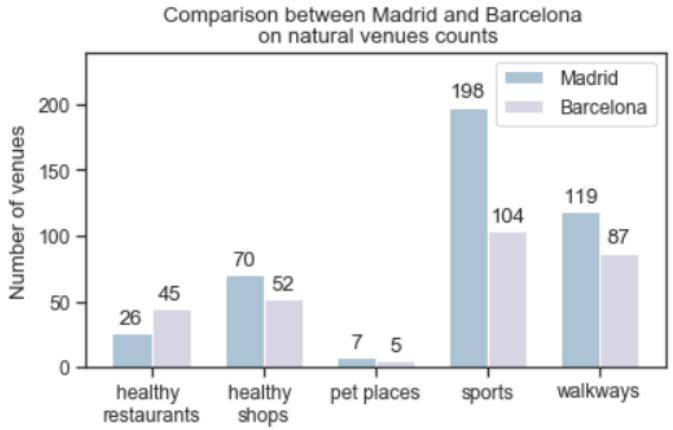
- A funneling process was followed as:
  - choose the best city
  - select the most suitable cluster of neighborhoods within that city
  - uncover the pool of neighborhoods affordable for the migrant as per salary level
- To choose the best city:
  - define and count ‘natural’ venues per city / district / neighborhood
  - compare cities based on those visually and via t-test for unequal samples
- Once city chosen, define clusters based on all venue types and choose the one with a more ‘natural’-like profile
- Subset pools of neighborhoods a migrant could move to, based on the average renting amount and their possible salary

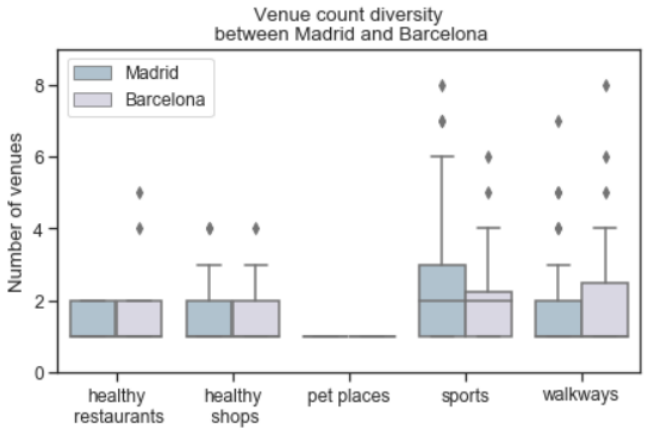
thetamize
be smart with data

CHOSE THE BEST OF THE TWO CITIES

BASED ON THE AMOUNT OF ‘NATURAL’ VENUES



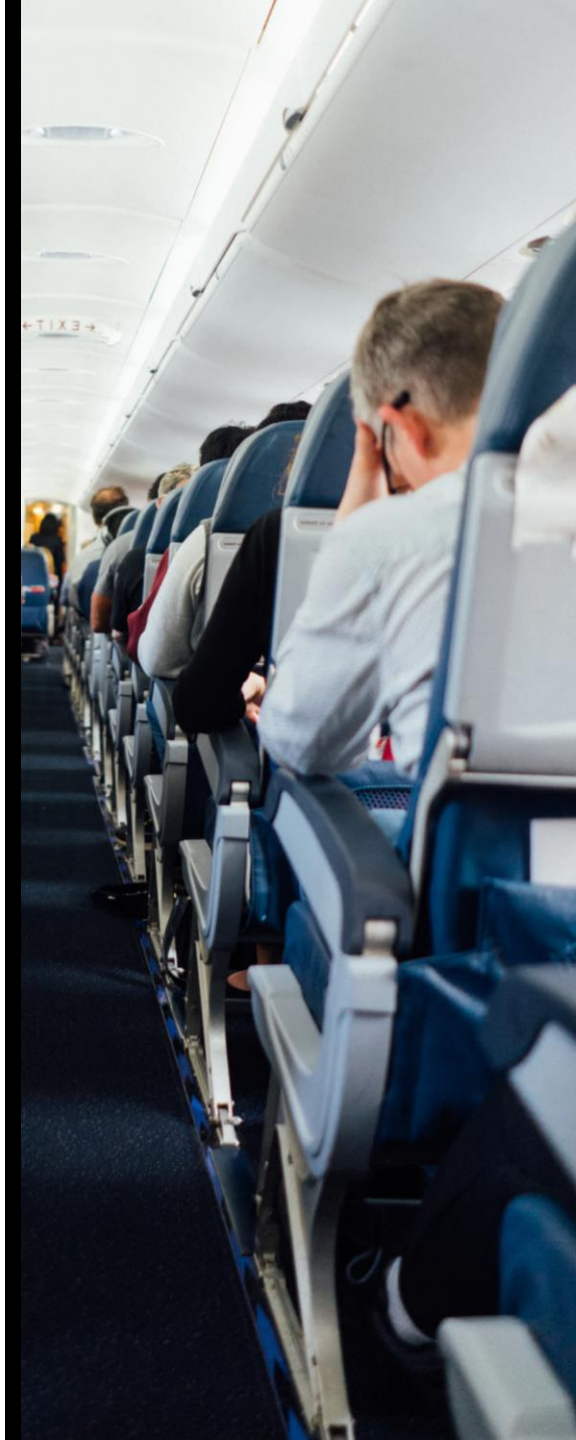




Madrid is the city which has the biggest amount of ‘natural’ venues, as well as having those more equally distributed amongst neighborhoods:

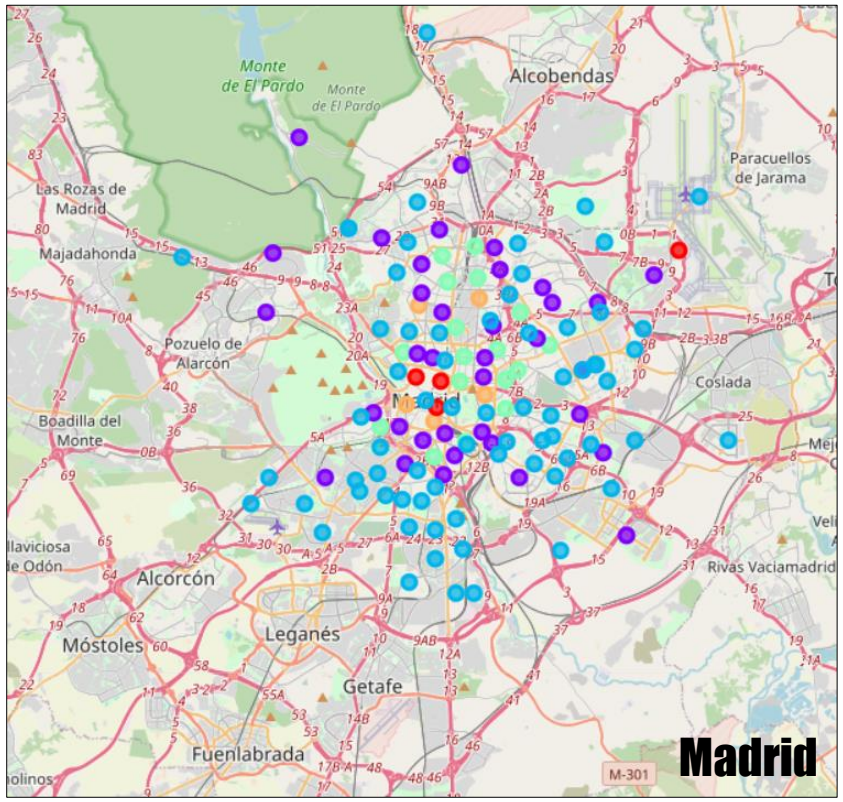
T-test t-value: -2.17 p = 0.04

thetamize
be smart with data



DEFINE CLUSTERS OF NEIGHBORHOODS

AND CHOSE THE MOST ‘NATURAL’ ONE



When generating clusters via k-means the most balanced option was defining a priori a k-value of 5 clusters.

Cluster 3 seemed the best candidate, but with 68 out of the 131 neighborhoods in, still required some additional cleaning. The final list of top 10 ‘natural’ options was:

	Neighborhood	Natural Rank	Average Home Size m2	Rental m2 EUR	Average Rental EUR
0	Fuentelarreina	7	269	12.3	3308.7
1	Valdezarza	7	88	12.3	1082.4
2	Santa Eugenia	5	102	8.8	897.6
3	Media Legua	5	99	11.3	1118.7
4	Portazgo	5	83	11.7	971.1
5	Las Aguilas	5	84	10.0	840.0
6	Rosas	5	123	10.6	1303.8
7	Abrantes	5	84	10.4	873.6
8	Zofio	5	82	11.3	926.6
9	Moscardo	5	80	11.8	944.0

thetamize
be smart with data

SELECT THE POSSIBLE NEIGHBORHOOD

YOU MAY BE ABLE TO PAY WITH YOUR SALARY

Job positions in Madrid and their average year salary, can define 3 salary ranges and provide options to migrants based on those:

Salary range 1: EUR20k – EUR30k

	District	Neighborhood	Natural Rank	Average Home Size m2	Average Rental EUR
2	Latina	Las Aguilas	5	84	840.0
3	Carabanchel	Abrantes	5	84	873.6
8	Villa de Vallecas	Santa Eugenia	5	102	897.6

Salary range 2: EUR30k – EUR40k

	District	Neighborhood	Natural Rank	Average Home Size m2	Average Rental EUR
4	Usera	Moscardo	5	80	944.0
5	Usera	Zofio	5	82	926.6
6	Puente de Vallecas	Portazgo	5	83	971.1

Salary range 3: EUR40k – EUR50k

	District	Neighborhood	Natural Rank	Average Home Size m2	Average Rental EUR
1	Moncloa-Aravaca	Valdezarza	7	88	1082.4
7	Moratalaz	Media Legua	5	99	1118.7
9	San Blas-Canillejas	Rosas	5	123	1303.8

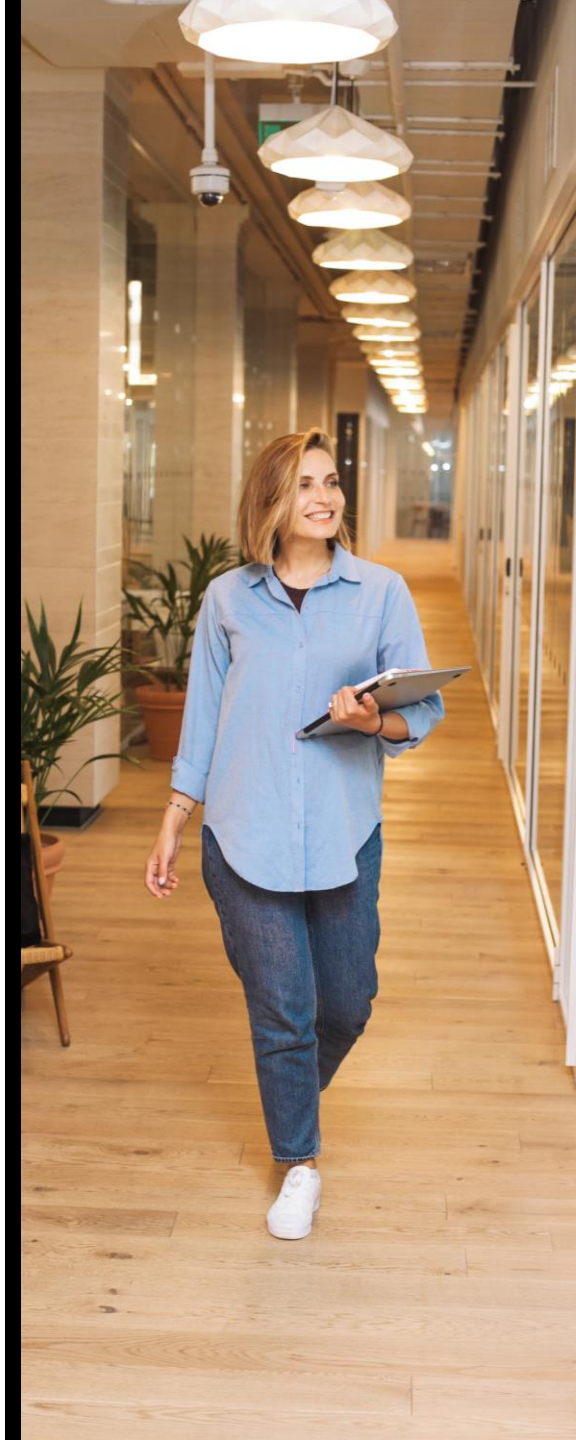
thetamize
be smart with data

WHAT WE LEARNED

AND WHAT WE COULD KEEP LEARNING

- Madrid seems a better provisioned city for migrants looking for a ‘natural’ way of living
- The more ‘natural’ neighborhoods are spread across the city and have different average home sizes and renting prices
- Different salary levels of professional migrants would still provide them diverse options to live as they want in Madrid
- There are possible applications for this data-driven approach for:
  - talent acquisition companies willing to better serve through a holistic approach
  - local public entities wanting to attract high profile neighbors
- Some improvements would come from being able to define several other ‘persona’ profiles and adapt this system to multi-profile usage

thetamize
be smart with data



2021. Sergio Hidalgo - *sergio.hidalgo@thetamize.com*

thetamize

be smart with data