REPORT by Almu

INVESTMENT IN MADRID OR BARCELONA

RICS' Global Commercial Property Monitor is a quarterly guide to the trends in the commercial property investment and occupier markets.

Last September, the Iberian Commercial Property Monitor index was published by RICS, and it shows Madrid and Barcelona are the best places in Europe to invest, next to Amsterdam and Budapest.

The objective of this analysis is to help **investors**, **who want to invest in Spain**, decide which city, Madrid or Barcelona, has the best opportunities.

DATA

In this analysis, we use the Foursquare API to obtain location data of hotels, both in Madrid, and Barcelona, and we compare the results, so that we can find any gap in the hotels distribution which turns into an investment opportunity.

Let's take the data via Foursquare API for Hotels in Madrid downtown.

	Area	name	Latitude	Longitude
0	28014	Hotel Agumar	40.406.855	-3.683.119
1	28045	AC Hotel by Marriott	40.403.773	-3.689.994
		Atocha		
2	28045	AC Hotel by Marriott	40.405.123	-3.693.702
		Carlton Madrid		
3	28012	Hotel Catalonia Atocha ****	40.411.843	-3.697.838
4	28012	Hotel TRYP Madrid	40.411.691	-3.697.533
		Atocha		
5	28014	Radisson Blu Hotel,	40.412.517	-3.694.167
		Madrid Prado		
6	28014	Vincci Soho Hotel	40.414.773	-3.698.160
7	28012	Hotel Catalonia Plaza	40.413.180	-3.700.828
		Mayor		
8	28046	Hotel Villa Magna	40.429.984	-3.687.964
9	28001	AC Hotel by Marriott	40.421.381	-3.689.498
		Recoletos		
10	28004	Hotel 7 Islas	40.421.292	-3.701.927
11	28001	Hotel Vincci Soma	40.424.943	-3.677.994
12	28013	Hotel Catalonia Gran Vía ****	40.419.551	-3.699.064
13	28001	Hotel Jardín de Recoletos	40.422.124	-3.689.200
14	28014	Hotel Catalonia Las	40.414.554	-3.699.495
		Cortes		
15	28001	Hotel Hospes Madrid	40.420.445	-3.689.146
16	28012	Medium Cortezo Hotel	40.413.721	-3.703.601
17	28014	Hotel Urban Madrid	40.416.372	-3.698.679

40		-		
18	28013	Hotel Praktik Metropol	40.419.691	-3.701.709
19	28004	Only YOU Hotel&Lounge	40.422.200	-3.695.799
20	28013	Hotel Emperador Madrid	40.421.427	-3.707.880
21	28005	Hotel Ganivet ***	40.408.105	-3.710.902
22	28001	Hotel Único Madrid	40.428.560	-3.686.494
23	28004	Hotel Eurostars Central	40.426.954	-3.698.475
24	28012	Hotel chic&basic Atocha	40.410.325	-3.694.692
25	28013	Hotel Europa Madrid***	40.417.503	-3.703.612
26	28013	Hotel Intur Palacio San Martín	40.418.571	-3.706.700
27	28013	Hotel Mayorazgo	40.422.105	-3.709.476
28	28012	Hotel Catalonia Puerta del Sol	40.414.012	-3.702.940
29	28010	Hotel Gran Versalles	40.428.374	-3.697.102
30	28014	Only You Hotel Atocha	40.407.161	-3.688.438
31	28013	Hotel Francisco I	40.417.510	-3.707.456
32	28012	Hotel Husa Paseo del Arte	40.409.883	-3.693.564
33	28014	Hotel Ritz	40.415.591	-3.692.439
34	28010	Hotel Santo Mauro	40.430.934	-3.693.156
35	28004	Room Mate Óscar Hotel	40.420.664	-3.699.170
36	28013	Hotel Opera Madrid	40.418.856	-3.710.226
37	28013	Hotel Atlántico	40.420.372	-3.704.764
38	28013	Senator Gran Via 70 Spa Hotel 4*	40.422.621	-3.709.561
39	28013	Hotel Petit Palace Plaza del Carmen	40.418.806	-3.703.129
40	28013	Hotel Vincci Gran Via	40.422.408	-3.708.890
41	28012	Hotel Victoria 4	40.416.237	-3.701.691
42	28013	Cafetería-Restaurante Hotel Europa	40.417.388	-3.703.623
43	28010	Hotel Juan de Austria	40.431.893	-3.699.728
44	28012	Hotel Mediodia	40.408.348	-3.692.810
45	28013	Hotel Preciados	40.419.705	-3.707.515
46	28014	Hotel Asturias	40.416.807	-3.700.278

Let's take the data via Foursquare API for Hotels in Barcelona downtown.

	Area	name	Latitude	Longitude
0	8002	Hotel Colon Barcelona	41.384.895	2.175.994
1	8003	Grand Hotel Central	41.384.969	2.177.663
2	8002	Hotel Petit Palace Boquería	41.381.217	2.174.108
		Garden		

3 8001 Hotel Colonial 41.382.347 2.186.777 4 8001 Hotel Catalonia Ramblas 41.385.270 2.166.965 5 8010 Hotel Catalonia Catedral 41.389.560 2.174.757 6 8002 Hotel Catalonia Catedral 41.384.747 2.174.455 7 8039 Eurostars Grand Marina Hotel Barcelona 41.384.747 2.174.455 8 8002 Hotel Royal Ramblas 41.384.362 2.170.742 9 8002 Hotel Catalonia Portal de Catalonia Portal de Piñagel 41.386.406 2.168.230 10 8002 Hotel Barcelona Catedral 41.385.435 2.172.743 12 8002 Olivia Plaza Hotel 41.385.435 2.171.258 13 8010 El Palace Hotel Barcelona 41.391.485 2.171.460 14 8002 Hotel Dauquesa de Cardona 41.391.485 2.171.460 15 8002 Hotel Catalonia Port 41.389.264 2.166.129 17 8007 Hotel Catalonia Port 41.389.264 2.166.1					
5 8010 Hotel Vincci Gala 41.389.560 2.174.757 6 8002 Hotel Catalonia Catedral 41.384.747 2.174.455 7 8039 Eurostars Grand Marina Hotel Barcelona 41.371.508 2.181.490 8 8002 Hotel Royal Ramblas 41.384.362 2.170.742 9 8002 Hotel Catalonia Plaza Catalunya 41.386.406 2.168.230 10 8002 Hotel Barcelona Catedral 41.386.406 2.168.230 11 8002 Hotel Barcelona Catedral 41.384.972 2.172.743 11 8002 Hotel Catalonia Portal de l'Anse. 41.385.435 2.172.743 12 8002 Hotel Dagues de Cardona 41.385.435 2.171.258 13 8010 El Palace Hotel Barcelona 41.391.485 2.171.460 14 8002 Hotel Catalonia Portalonia Portaloni	3	8003	Hotel Colonial	41.382.347	2.180.777
6 8002 Hotel Catalonia Catedral 41.384.747 2.174.455 7 8039 Eurostars Grand Marina Hotel Barcelona 41.371.508 2.181.490 8 8002 Hotel Royal Ramblas 41.384.362 2.170.742 9 8002 Hotel Catalonia Plaza Catedral 41.386.406 2.168.230 10 8002 Hotel Barcelona Catedral 41.384.972 2.175.132 11 8002 Hotel Catalonia Portal de I'Angel 41.385.435 2.172.743 12 8002 Olivia Plaza Hotel 41.386.074 2.171.258 13 8010 El Palace Hotel Barcelona 41.391.485 2.171.460 14 8002 Hotel Duquesa de Cardona 41.391.485 2.171.460 15 8002 Hotel Catalonia Avinyó 41.381.260 2.176.382 16 8007 NH Gran Hotel Calderón 41.389.264 2.166.129 17 8007 Hotel Regina 41.390.191 2.169.558 Gràcia 41.386.020 2.167.945 19 8003	4	8001	Hotel Catalonia Ramblas	41.385.270	2.166.965
7 8039 Eurostars Grand Marina Hotel Barcelona 41.371.508 2.181.490 8 8002 Hotel Royal Ramblas 41.384.362 2.170.742 9 8002 Hotel Catalonia Plaza Catadral 41.386.406 2.168.230 10 8002 Hotel Barcelona Catedral 41.384.972 2.175.132 11 8002 Hotel Catalonia Portal de I'Angel 41.385.435 2.172.743 12 8002 Olivia Plaza Hotel 41.386.074 2.171.258 13 8010 El Palace Hotel Barcelona 41.391.485 2.171.460 14 8002 Hotel Duquesa de Cardona 41.391.485 2.171.460 14 8002 Hotel Catalonia Avinyó 41.381.260 2.176.382 15 8002 Hotel Catalonia Passeig de Gràcia 41.391.485 2.176.382 16 8007 NH Gran Hotel Calderón 41.389.264 2.169.558 17 8007 Hotel Regina 41.386.667 2.184.064 20 8002 Hotel Catalonia Port 41.378.738 2.178.700<	5	8010	Hotel Vincci Gala	41.389.560	2.174.757
Hotel Barcelona Hotel Royal Ramblas 41.384.362 2.170.742 9 8002 Hotel Catalonia Plaza 41.386.406 2.168.230 Catalunya 1.386.406 2.175.132 11 8002 Hotel Catalonia Portal de 41.385.435 2.172.743 Langel 2.171.258 2.172.743 Langel 2.171.258	6	8002	Hotel Catalonia Catedral	41.384.747	2.174.455
8 8002 Hotel Royal Ramblas 41.384.362 2.170.742 9 8002 Hotel Catalonia Plaza Catalunya 41.386.406 2.168.230 10 8002 Hotel Barcelona Catedral 41.384.972 2.175.132 11 8002 Hotel Catalonia Portal de I'Angel 41.385.435 2.172.743 12 8002 Olivia Plaza Hotel 41.386.074 2.171.258 13 8010 El Palace Hotel Barcelona 41.391.485 2.171.460 14 8002 Hotel Duquesa de Cardona 41.391.485 2.171.460 15 8002 Hotel Catalonia Avinyó 41.381.260 2.176.382 16 8007 NH Gran Hotel Calderón 41.389.264 2.166.129 17 8007 Hotel Catalonia Passeig de Gràcia 41.390.191 2.169.558 18 8002 Hotel Regina 41.386.020 2.167.945 19 8003 K+K Hotel Picasso 41.386.020 2.167.945 20 8002 Hotel Catalonia Port 41.378.738 2.178.700	7	8039	Eurostars Grand Marina	41.371.508	2.181.490
9 8002 Hotel Catalonia Plaza Catalunya 41.386.406 2.168.230 10 8002 Hotel Barcelona Catedral 41.384.972 2.175.132 11 8002 Hotel Catalonia Portal de l'An.385.435 2.172.743 12 8002 Olivia Plaza Hotel 41.385.435 2.171.450 14 8002 Hotel Barcelona 41.391.485 2.171.460 14 8002 Hotel Duquesa de Cardona 41.391.485 2.171.460 15 8002 Hotel Catalonia Avinyó 41.381.260 2.176.382 16 8007 NH Gran Hotel Calderón 41.389.264 2.166.129 17 8007 Hotel Catalonia Passeig de Gràcia 41.390.191 2.169.558 18 8002 Hotel Regina 41.386.020 2.167.945 19 8003 K+K Hotel Picasso 41.386.020 2.169.558 20 8002 Hotel Catalonia Port 41.378.738 2.178.700 21 8002 Hotel Catalonia Port 41.385.429 2.171.697 22					
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11 8002 Hotel Catalonia Portal de I'Àngel 41.385.435 2.172.743 12 8002 Olivia Plaza Hotel 41.386.074 2.171.258 13 8010 El Palace Hotel Barcelona 41.391.485 2.171.460 14 8002 Hotel Duquesa de Cardona 41.379.801 2.180.637 15 8002 Hotel Catalonia Avinyó 41.381.260 2.176.382 16 8007 NH Gran Hotel Calderón 41.389.264 2.166.129 17 8007 Hotel Catalonia Passeig de Gràcia 41.390.191 2.169.558 18 8002 Hotel Regina 41.386.020 2.167.945 19 8003 K+K Hotel Picasso 41.386.667 2.184.064 20 8002 Hotel Catalunya 41.378.738 2.178.700 21 8002 Hotel Catalunya 41.385.429 2.171.697 22 8010 Hotel Serhs Rivoli Rambla 41.384.191 2.171.060 23 8002 Hotel Serhs Rivoli Rambla 41.379.954 2.170.494					
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14 8002 Hotel Duquesa de Cardona 41.379.801 2.180.637 15 8002 Hotel Catalonia Avinyó 41.381.260 2.176.382 16 8007 NH Gran Hotel Calderón 41.389.264 2.166.129 17 8007 Hotel Catalonia Passeig de Gràcia 41.390.191 2.169.558 18 8002 Hotel Regina 41.386.020 2.167.945 19 8003 K+K Hotel Picasso 41.386.067 2.184.064 20 8002 Hotel Catalonia Port 41.378.738 2.178.700 21 8002 Hotel Catalunya 41.385.429 2.171.697 22 8010 Hotel Indigo Barcelona 41.391.328 2.170.100 23 8002 Hotel Serhs Rivoli Rambla 41.384.191 2.171.060 24 8010 Hotel Acta Atrium Palace 41.390.954 2.170.494 25 8001 Hotel España 41.374.664 2.170.726 27 8001 Hotel España 41.379.964 2.172.833 28 8	12	8002	Olivia Plaza Hotel	41.386.074	2.171.258
15 8002 Hotel Catalonia Avinyó 41.381.260 2.176.382 16 8007 NH Gran Hotel Calderón 41.389.264 2.166.129 17 8007 Hotel Catalonia Passeig de Gràcia 41.390.191 2.169.558 18 8002 Hotel Regina 41.386.020 2.167.945 19 8003 K+K Hotel Picasso 41.386.667 2.184.064 20 8002 Hotel Catalonia Port 41.378.738 2.178.700 21 8002 Hotel Catalunya 41.385.429 2.171.697 22 8010 Hotel Indigo Barcelona 41.391.328 2.170.100 23 8002 Hotel Serhs Rivoli Rambla 41.384.191 2.171.060 24 8010 Hotel Acta Atrium Palace 41.390.954 2.170.494 25 8001 Hotel España 41.374.664 2.170.726 27 8001 Hotel Caspe 41.379.964 2.172.833 28 8013 Ayre Hotel Caspe 41.396.066 2.179.531 29 8010	13	8010	El Palace Hotel Barcelona	41.391.485	2.171.460
16 8007 NH Gran Hotel Calderón 41.389.264 2.166.129 17 8007 Hotel Catalonia Passeig de Gràcia 41.390.191 2.169.558 18 8002 Hotel Regina 41.386.020 2.167.945 19 8003 K+K Hotel Picasso 41.386.667 2.184.064 20 8002 Hotel Catalonia Port 41.378.738 2.178.700 21 8002 Hotel Catalunya 41.385.429 2.171.697 22 8010 Hotel Indigo Barcelona 41.391.328 2.170.100 23 8002 Hotel Serhs Rivoli Rambla 41.384.191 2.171.060 24 8010 Hotel Acta Atrium Palace 41.390.954 2.170.494 25 8001 Hotel España 41.379.899 2.172.996 26 8004 Tryp Barcelona Apolo Hotel 41.374.664 2.170.726 27 8001 Hotel España 41.396.066 2.179.531 29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 </th <th>14</th> <th>8002</th> <th>Hotel Duquesa de Cardona</th> <th>41.379.801</th> <th>2.180.637</th>	14	8002	Hotel Duquesa de Cardona	41.379.801	2.180.637
17 8007 Hotel Catalonia Passeig de Gràcia 41.390.191 2.169.558 18 8002 Hotel Regina 41.386.020 2.167.945 19 8003 K+K Hotel Picasso 41.386.667 2.184.064 20 8002 Hotel Catalonia Port 41.378.738 2.178.700 21 8002 Hotel Catalunya 41.385.429 2.171.697 22 8010 Hotel Indigo Barcelona 41.391.328 2.170.100 23 8002 Hotel Serhs Rivoli Rambla 41.384.191 2.171.060 24 8010 Hotel Acta Atrium Palace 41.390.954 2.170.494 25 8001 Hotel España 41.379.899 2.172.996 26 8004 Tryp Barcelona Apolo Hotel 41.374.664 2.170.726 27 8001 Hotel España 41.396.066 2.179.531 29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8001 Hotel San Agustín 41.380.715 2.171.706 33	15	8002	Hotel Catalonia Avinyó	41.381.260	2.176.382
I8 8002 Hotel Regina 41.386.020 2.167.945 19 8003 K+K Hotel Picasso 41.386.667 2.184.064 20 8002 Hotel Catalonia Port 41.378.738 2.178.700 21 8002 Hotel Catalunya 41.385.429 2.171.697 22 8010 Hotel Indigo Barcelona 41.391.328 2.170.100 23 8002 Hotel Serhs Rivoli Rambla 41.384.191 2.171.060 24 8010 Hotel Acta Atrium Palace 41.390.954 2.170.494 25 8001 Hotel España 41.374.664 2.170.726 27 8001 Hotel España 41.374.664 2.170.726 27 8001 Hotel Caspe 41.396.066 2.179.531 29 8010 Hotel NH Pódium 41.389.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8002 Hotel San Agustín 41.380.715 2.171.706 33 8001 Hotel Barceló Rav	16	8007	NH Gran Hotel Calderón	41.389.264	2.166.129
18 8002 Hotel Regina 41.386.020 2.167.945 19 8003 K+K Hotel Picasso 41.386.667 2.184.064 20 8002 Hotel Catalonia Port 41.378.738 2.178.700 21 8002 Hotel Catalunya 41.385.429 2.171.697 22 8010 Hotel Indigo Barcelona 41.391.328 2.170.100 23 8002 Hotel Serhs Rivoli Rambla 41.384.191 2.171.060 24 8010 Hotel Acta Atrium Palace 41.390.954 2.170.494 25 8001 Hotel España 41.379.899 2.172.996 26 8004 Tryp Barcelona Apolo Hotel 41.374.664 2.170.726 27 8001 Hotel España 41.379.664 2.172.833 28 8013 Ayre Hotel Caspe 41.396.066 2.179.531 29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8001 Hotel San Agustín 41.380.715 2.171.706 32 8001 <th>17</th> <th>8007</th> <th>Hotel Catalonia Passeig de</th> <th>41.390.191</th> <th>2.169.558</th>	17	8007	Hotel Catalonia Passeig de	41.390.191	2.169.558
19 8003 K+K Hotel Picasso 41.386.667 2.184.064 20 8002 Hotel Catalonia Port 41.378.738 2.178.700 21 8002 Hotel Catalunya 41.385.429 2.171.697 22 8010 Hotel Indigo Barcelona 41.391.328 2.170.100 23 8002 Hotel Serhs Rivoli Rambla 41.384.191 2.171.060 24 8010 Hotel Acta Atrium Palace 41.390.954 2.170.494 25 8001 Hotel España 41.374.664 2.170.726 27 8001 Hotel España 41.374.664 2.170.726 27 801 Hotel Caspe 41.396.066 2.179.531 29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8002 Hotel San Agustín 41.380.715 2.171.706 33 8001 Hotel Barceló Raval 41.393.767 2.171.349 35 8007 Hotel Praktik Garden 41.388.921 2.165.360 36 8002			Gràcia		
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21 8002 Hotel Catalunya 41.385.429 2.171.697 22 8010 Hotel Indigo Barcelona 41.391.328 2.170.100 23 8002 Hotel Serhs Rivoli Rambla 41.384.191 2.171.060 24 8010 Hotel Acta Atrium Palace 41.390.954 2.170.494 25 8001 Hotel España 41.379.899 2.172.996 26 8004 Tryp Barcelona Apolo Hotel 41.374.664 2.170.726 27 8001 Hotel España 41.379.964 2.172.833 28 8013 Ayre Hotel Caspe 41.396.066 2.179.531 29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8002 Hotel 1898 41.383.404 2.170.680 32 8001 Hotel San Agustín 41.380.715 2.171.706 33 8001 Hotel Barceló Raval 41.379.025 2.169.729 34 8009 Hotel Praktik Garden 41.388.921 2.165.360 36 8002 <th>19</th> <th>8003</th> <th>K+K Hotel Picasso</th> <th>41.386.667</th> <th>2.184.064</th>	19	8003	K+K Hotel Picasso	41.386.667	2.184.064
22 8010 Hotel Indigo Barcelona 41.391.328 2.170.100 23 8002 Hotel Serhs Rivoli Rambla 41.384.191 2.171.060 24 8010 Hotel Acta Atrium Palace 41.390.954 2.170.494 25 8001 Hotel España 41.379.899 2.172.996 26 8004 Tryp Barcelona Apolo Hotel 41.374.664 2.170.726 27 8001 Hotel España 41.379.964 2.172.833 28 8013 Ayre Hotel Caspe 41.396.066 2.179.531 29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8002 Hotel 1898 41.383.404 2.170.680 32 8001 Hotel San Agustín 41.380.715 2.171.706 33 8001 Hotel Barceló Raval 41.379.025 2.169.729 34 8009 Hotel Praktik Garden 41.393.767 2.171.349 35 8007 Hotel Petit Palace Museum 41.388.921 2.165.360 36 <t< th=""><th>20</th><th>8002</th><th>Hotel Catalonia Port</th><th>41.378.738</th><th>2.178.700</th></t<>	20	8002	Hotel Catalonia Port	41.378.738	2.178.700
23 8002 Hotel Serhs Rivoli Rambla 41.384.191 2.171.060 24 8010 Hotel Acta Atrium Palace 41.390.954 2.170.494 25 8001 Hotel España 41.379.899 2.172.996 26 8004 Tryp Barcelona Apolo Hotel 41.374.664 2.170.726 27 8001 Hotel España 41.379.964 2.172.833 28 8013 Ayre Hotel Caspe 41.396.066 2.179.531 29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8002 Hotel 1898 41.383.404 2.170.680 32 8001 Hotel San Agustín 41.380.715 2.171.706 33 8001 Hotel Barceló Raval 41.379.025 2.169.729 34 8009 Hotel Praktik Garden 41.388.921 2.165.360 36 8002 Hotel Flor Parks 41.380.726 2.173.853 37 8003 Musik Boutique Hotel 41.388.007 2.178.391	21	8002	Hotel Catalunya	41.385.429	2.171.697
24 8010 Hotel Acta Atrium Palace 41.390.954 2.170.494 25 8001 Hotel España 41.379.899 2.172.996 26 8004 Tryp Barcelona Apolo Hotel 41.374.664 2.170.726 27 8001 Hotel España 41.379.964 2.172.833 28 8013 Ayre Hotel Caspe 41.396.066 2.179.531 29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8002 Hotel 1898 41.383.404 2.170.680 32 8001 Hotel San Agustín 41.380.715 2.171.706 33 8001 Hotel Barceló Raval 41.379.025 2.169.729 34 8009 Hotel Praktik Garden 41.383.921 2.171.349 35 8007 Hotel Petit Palace Museum 41.388.921 2.165.360 36 8002 Hotel Flor Parks 41.380.726 2.173.853 37 8003 Musik Boutique Hotel 41.388.007 2.178.391	22	8010	Hotel Indigo Barcelona	41.391.328	2.170.100
25 8001 Hotel España 41.379.899 2.172.996 26 8004 Tryp Barcelona Apolo Hotel 41.374.664 2.170.726 27 8001 Hotel España 41.379.964 2.172.833 28 8013 Ayre Hotel Caspe 41.396.066 2.179.531 29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8002 Hotel 1898 41.383.404 2.170.680 32 8001 Hotel San Agustín 41.380.715 2.171.706 33 8001 Hotel Barceló Raval 41.379.025 2.169.729 34 8009 Hotel Praktik Garden 41.393.767 2.171.349 35 8007 Hotel Petit Palace Museum 41.388.921 2.165.360 36 8002 Hotel Flor Parks 41.380.726 2.173.853 37 8003 Musik Boutique Hotel 41.388.007 2.178.391	23	8002	Hotel Serhs Rivoli Rambla	41.384.191	2.171.060
26 8004 Tryp Barcelona Apolo Hotel 41.374.664 2.170.726 27 8001 Hotel España 41.379.964 2.172.833 28 8013 Ayre Hotel Caspe 41.396.066 2.179.531 29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8002 Hotel 1898 41.383.404 2.170.680 32 8001 Hotel San Agustín 41.380.715 2.171.706 33 8001 Hotel Barceló Raval 41.379.025 2.169.729 34 8009 Hotel Praktik Garden 41.393.767 2.171.349 35 8007 Hotel Petit Palace Museum 41.388.921 2.165.360 36 8002 Hotel Flor Parks 41.380.726 2.173.853 37 8003 Musik Boutique Hotel 41.388.007 2.178.391	24	8010	Hotel Acta Atrium Palace	41.390.954	2.170.494
27 8001 Hotel España 41.379.964 2.172.833 28 8013 Ayre Hotel Caspe 41.396.066 2.179.531 29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8002 Hotel 1898 41.383.404 2.170.680 32 8001 Hotel San Agustín 41.380.715 2.171.706 33 8001 Hotel Barceló Raval 41.379.025 2.169.729 34 8009 Hotel Praktik Garden 41.393.767 2.171.349 35 8007 Hotel Petit Palace Museum 41.388.921 2.165.360 36 8002 Hotel Flor Parks 41.380.726 2.173.853 37 8003 Musik Boutique Hotel 41.388.007 2.178.391	25	8001	Hotel España	41.379.899	2.172.996
28 8013 Ayre Hotel Caspe 41.396.066 2.179.531 29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8002 Hotel 1898 41.383.404 2.170.680 32 8001 Hotel San Agustín 41.380.715 2.171.706 33 8001 Hotel Barceló Raval 41.379.025 2.169.729 34 8009 Hotel Praktik Garden 41.393.767 2.171.349 35 8007 Hotel Petit Palace Museum 41.388.921 2.165.360 36 8002 Hotel Flor Parks 41.380.726 2.173.853 37 8003 Musik Boutique Hotel 41.388.007 2.178.391	26	8004	Tryp Barcelona Apolo Hotel	41.374.664	2.170.726
29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8002 Hotel 1898 41.383.404 2.170.680 32 8001 Hotel San Agustín 41.380.715 2.171.706 33 8001 Hotel Barceló Raval 41.379.025 2.169.729 34 8009 Hotel Praktik Garden 41.393.767 2.171.349 35 8007 Hotel Petit Palace Museum 41.388.921 2.165.360 36 8002 Hotel Flor Parks 41.380.726 2.173.853 37 8003 Musik Boutique Hotel 41.388.007 2.178.391	27	8001	Hotel España	41.379.964	2.172.833
29 8010 Hotel NH Pódium 41.391.672 2.177.914 30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8002 Hotel 1898 41.383.404 2.170.680 32 8001 Hotel San Agustín 41.380.715 2.171.706 33 8001 Hotel Barceló Raval 41.379.025 2.169.729 34 8009 Hotel Praktik Garden 41.393.767 2.171.349 35 8007 Hotel Petit Palace Museum 41.388.921 2.165.360 36 8002 Hotel Flor Parks 41.380.726 2.173.853 37 8003 Musik Boutique Hotel 41.388.007 2.178.391	28	8013	Ayre Hotel Caspe	41.396.066	2.179.531
30 8003 Hotel Catalonia Born 41.389.819 2.180.023 31 8002 Hotel 1898 41.383.404 2.170.680 32 8001 Hotel San Agustín 41.380.715 2.171.706 33 8001 Hotel Barceló Raval 41.379.025 2.169.729 34 8009 Hotel Praktik Garden 41.393.767 2.171.349 35 8007 Hotel Petit Palace Museum 41.388.921 2.165.360 36 8002 Hotel Flor Parks 41.380.726 2.173.853 37 8003 Musik Boutique Hotel 41.388.007 2.178.391					
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33 8001 Hotel Barceló Raval 41.379.025 2.169.729 34 8009 Hotel Praktik Garden 41.393.767 2.171.349 35 8007 Hotel Petit Palace Museum 41.388.921 2.165.360 36 8002 Hotel Flor Parks 41.380.726 2.173.853 37 8003 Musik Boutique Hotel 41.388.007 2.178.391					
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35 8007 Hotel Petit Palace Museum 41.388.921 2.165.360 36 8002 Hotel Flor Parks 41.380.726 2.173.853 37 8003 Musik Boutique Hotel 41.388.007 2.178.391	33	8001	Hotel Barceló Raval	41.379.025	2.169.729
36 8002 Hotel Flor Parks 41.380.726 2.173.853 37 8003 Musik Boutique Hotel 41.388.007 2.178.391	34	8009	Hotel Praktik Garden	41.393.767	2.171.349
37 8003 Musik Boutique Hotel 41.388.007 2.178.391	35	8007	Hotel Petit Palace Museum	41.388.921	2.165.360
·	36	8002	Hotel Flor Parks	41.380.726	2.173.853
,	37	8003	Musik Boutique Hotel	41.388.007	2.178.391
38 8001 Hotel Gaudí 41.378.903 2.174.046	38	8001	Hotel Gaudí	41.378.903	2.174.046

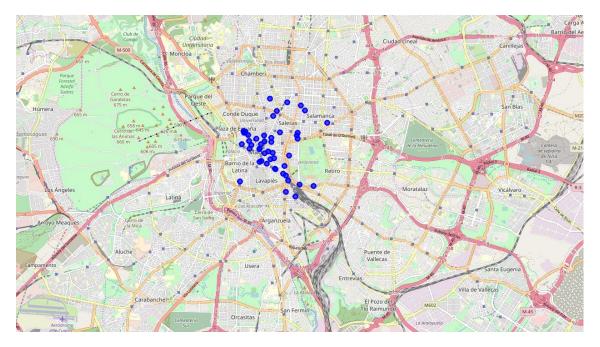
39	8002	Nouvel Hotel	41.385.272	2.171.669
40	8001	Hotel Lleó	41.385.754	2.166.527
41	8008	Alexandra Barcelona Hotel,	41.393.137	2.161.503
		Curio Collection by		
42	8001	Hotel Medium Monegal	41.385.337	2.169.708
43	8002	Hotel Neri	41.383.295	2.175.287
44	8003	Banys Orientals Hotel	41.383.738	2.180.013
		Barcelona		
45	8011	Hotel Gran Ronda	41.383.130	2.163.298

METHODOLOGY

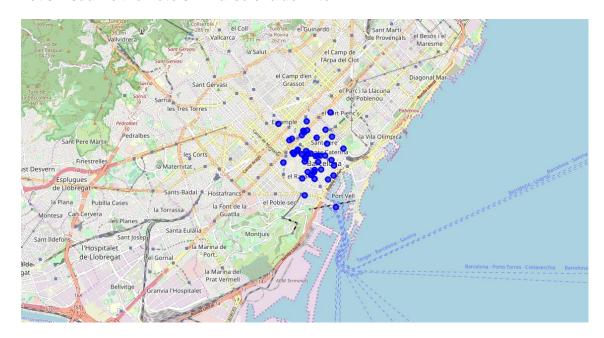
Our analytic approach has two phases, so we can decide easily which city, and where inside the city center, has the best investment opportunity. In the first phase, we see the current status of both cities, related to hotels distribution in each city center. We achieve this by plotting the maps of each city, with hotels superimposed on top. Once we know which city has more free-of-hotel space in its central zone, in the second phase, we use the unsupervised learning technique named Clustering, so that we can choose the best zone inside city center to build a new hotel.

First phase

Let's visualize the Hotels in Madrid downtown

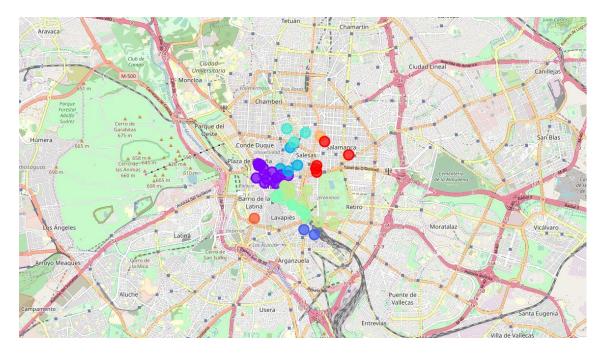


Let's visualize the Hotels in Barcelona downtown



Second phase

We use the Clustering technique named KMEANS, so that we can choose the best zone inside Madird downtown to build a new hotel.



RESULTS First Phase

Thanks to the maps with hotels superimposed on top, we realize Madrid is the best city to invest, since the central zone has more free-of-hotel space than Barcelona's, that is to say, the current amount of Hotels cover all city center in Barcelona, while there is much free space in Madrid.

RESULTS Second Phase

Looking at the clustering image, we can say the best zone to build a new hotel in Madrid center is the dark orange zone, that is, near "Barrio de la Latina" and "Lavapiés", as it is the area with less hotels.

DISCUSSION

Before doing this analysis, I was not able to say whether Barcelona or Madrid had opportunities of investment, but now, having the results in front of me, I can say both cities are great, though Madrid seems to have more free room for hotels, in the southern area of city center.

CONCLUSION

I recommend investors to build a new hotel in Madrid, near "Barrio de la Latina" and "Lavapiés".