

An abstract graphic on the left side of the slide, consisting of white lines and circles on a blue background, resembling a circuit board or a stylized tree structure.

CITY ENVIRONMENT AND QUALITY OF LIVING ANALYSIS

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CITY ENVIRONMENT AND INFRASTRUCTURE ARE THE MOST IMPORTANT DOMAINS INFLUENCING CITIZENS' QUALITY OF LIFE

In Mercer report defining quality of living ranking of 231 cities of the world there are several infrastructural and environmental factors for QoL evaluation:

- Recreation
- Housing
- Consumer goods availability
- Public services and transport
- Natural environment
- Socio-cultural environment
- School and education
- Medical and health consideration Mercer, Quality of living city ranking
<https://mobilityexchange.mercer.com/Insights/quality-of-living-rankings>

10 CITY VENUE TYPES

Venue Type	Venue Category
Arts & Entertainment	64
College & University	38
Event	12
Food	347
Nightlife Spot	24
Outdoors & Recreation	107
Professional & Other Places	105
Residence	5
Shop & Service	172
Travel & Transport	53

TO DETERMINE THE SUCCESSFUL CITY DEVELOPMENT STRATEGY OR LONG-TERM CITY DEVELOPMENT PROGRAM YOU NEED TO HAVE ANSWERS TO SEVERAL QUESTIONS:

- What is the current level of city infrastructure and environment development?
- What is the best practice in other cities or what are the main environmental and infrastructural characteristics of cities with high QoL rank?
- What is the difference between my city and the city chosen as standard?
- What are the priorities for my city development to increase citizens quality of life?

231 CITIES AND 30171 VENUES FOR ANALYSIS

Rank	City	Country/Region
0	1	Vienna Austria
1	2	Zürich Switzerland
2	3	Vancouver Canada
3	3	Munich Germany
4	3	Auckland New Zealand

	Rank	City	Country/Region	lat	lng	country	population
0	1	Vienna	Austria	48.2000	16.3666	Austria	2400000.0
0	1	Vienna	Austria	38.8996	-77.2597	United States	16544.0
0	1	Vienna	Austria	39.3238	-81.5383	United States	10370.0
1	2	Zürich	Switzerland	47.3800	8.5500	Switzerland	1108000.0
2	3	Vancouver	Canada	49.2734	-123.1216	Canada	2313328.0

(30171, 8)

	City	City Latitude	City Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category	Venue Type
0	Vienna	48.2000	16.3666	Novomatic Forum	48.200035	16.366388	Diner	Food
1	Auckland	-36.8481	174.7630	The Observatory	-36.848510	174.762315	Diner	Food
2	Amsterdam	52.3500	4.9166	Chefs Kantoortje	52.349805	4.918577	Diner	Food
3	Melbourne	-37.8200	144.9750	Mid Town Popup Diner	-37.817532	144.972930	Diner	Food
4	Ottawa	45.4167	-75.7000	Friendly Corner Deli	45.417622	-75.697946	Diner	Food

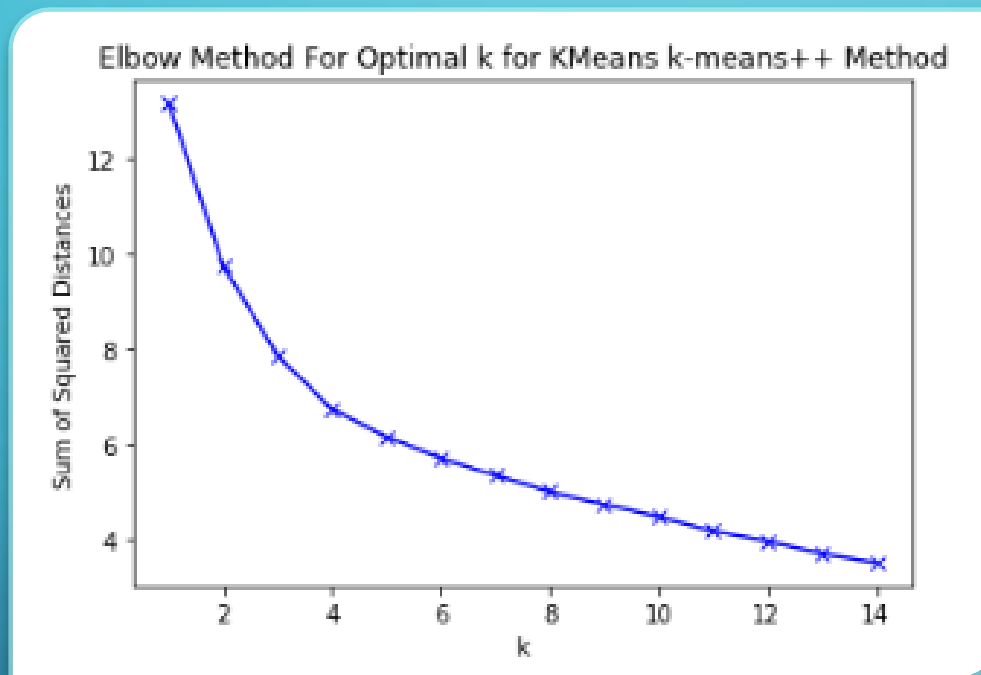
Venue Type	
Professional & Other Places	7987
Shop & Service	6637
Food	5937
Travel & Transport	2619
Outdoors & Recreation	1720
Nightlife Spot	1588
Arts & Entertainment	1510
College & University	1096
Residence	1044
Event	33

	City	Arts & Entertainment	College & University	Event	Food	Nightlife Spot	Outdoors & Recreation	Professional & Other Places	Residence	Shop & Service	Travel & Transport
0	Aberdeen	0.029586	0.248521	0.0	0.088757	0.053254	0.112426	0.130178	0.082840	0.159763	0.094675
1	Abidjan	0.051546	0.082474	0.0	0.077320	0.036082	0.020619	0.536082	0.030928	0.108247	0.056701
2	Abu Dhabi	0.026087	0.008696	0.0	0.147826	0.017391	0.060870	0.478261	0.026087	0.200000	0.034783
3	Abuja	0.026316	0.013158	0.0	0.131579	0.111842	0.078947	0.434211	0.039474	0.092105	0.072368
4	Accra	0.036810	0.036810	0.0	0.055215	0.055215	0.012270	0.411043	0.024540	0.331288	0.036810

K-MEANS FOR CITIES CLUSTERING

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1 13.146774855073406
2 9.748569971538892
3 7.868317458512998
4 6.74803642307427
5 6.16537054343498
6 5.718363914847828
7 5.360710543911819
8 5.019420368409162
9 4.749007775037902
10 4.492000841354252
11 4.191154303152052
12 3.9745543795556317
13 3.7241918514980226
14 3.5333401419859216
    
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K=4

	City	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue
0	Aberdeen	College & University	Shop & Service	Professional & Other Places	Outdoors & Recreation	Travel & Transport	Food	Residence	Nightlife Spot	Arts & Entertainment
1	Abidjan	Professional & Other Places	Shop & Service	College & University	Food	Travel & Transport	Arts & Entertainment	Nightlife Spot	Residence	Outdoors & Recreation
2	Abu Dhabi	Professional & Other Places	Shop & Service	Food	Outdoors & Recreation	Travel & Transport	Residence	Arts & Entertainment	Nightlife Spot	College & University
3	Abuja	Professional & Other Places	Food	Nightlife Spot	Shop & Service	Outdoors & Recreation	Travel & Transport	Residence	Arts & Entertainment	College & University
4	Accra	Professional & Other Places	Shop & Service	Nightlife Spot	Food	Travel & Transport	College & University	Arts & Entertainment	Residence	Outdoors & Recreation

WORLD MAP WITH CLUSTERED 231 CITIES



Cluster 0. FOR FOOD&SHOPPING

Cluster	Cluster	City	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue
7	0	Algiers	Food	Professional & Other Places	Shop & Service
9	0	Amman	Food	Shop & Service	Travel & Transport
24	0	Barcelona	Food	Shop & Service	Travel & Transport
26	0	Beijing	Food	Shop & Service	Professional & Other Places
38	0	Brasilia	Food	Shop & Service	Professional & Other Places
44	0	Budapest	Travel & Transport	Shop & Service	Food
46	0	Busan	Food	Shop & Service	Arts & Entertainment
52	0	Casablanca	Food	Professional & Other Places	Travel & Transport
53	0	Chengdu	Food	Travel & Transport	Shop & Service
56	0	Chongqing	Food	Travel & Transport	Shop & Service
67	0	Djibouti	Food	Professional & Other Places	Travel & Transport
68	0	Doha	Food	Shop & Service	Arts & Entertainment
70	0	Dubai	Food	Shop & Service	Residence
78	0	Geneva	Food	Shop & Service	Professional & Other Places
80	0	Guangzhou	Food	Shop & Service	Professional & Other Places
83	0	Hanoi	Food	Shop & Service	Travel & Transport
85	0	Havana	Food	Travel & Transport	Arts & Entertainment
88	0	Hong Kong	Food	Shop & Service	Professional & Other Places
95	0	Jeddah	Food	Shop & Service	Professional & Other Places
96	0	Jilin	Food	Travel & Transport	Shop & Service
105	0	Kobe	Food	Nightlife Spot	Shop & Service
107	0	Kuala Lumpur	Food	Shop & Service	Professional & Other Places
113	0	Leipzig	Shop & Service	Food	Professional & Other Places
117	0	Lisbon	Food	Professional & Other Places	Shop & Service
125	0	Lyon	Food	Nightlife Spot	Shop & Service
130	0	Manila	Food	Travel & Transport	Shop & Service
146	0	Nagoya	Food	Shop & Service	Nightlife Spot
148	0	Nanjing	Food	Travel & Transport	Shop & Service
164	0	Phnom Penh	Food	Shop & Service	Travel & Transport
172	0	Qingdao	Food	Travel & Transport	Shop & Service
174	0	Rabat	Food	Travel & Transport	Professional & Other Places
189	0	Shanghai	Shop & Service	Food	Professional & Other Places
190	0	Shenyang	Food	Shop & Service	Travel & Transport
191	0	Shenzhen	Food	Professional & Other Places	Shop & Service
192	0	Singapore	Food	Shop & Service	Professional & Other Places
201	0	Taichung	Food	Shop & Service	Professional & Other Places
202	0	Taipei	Food	Shop & Service	Professional & Other Places
212	0	Tripoli	Food	Shop & Service	Travel & Transport
217	0	Vientiane	Food	Professional & Other Places	Travel & Transport
224	0	Xian	Food	Travel & Transport	Shop & Service
227	0	Yerevan	Shop & Service	Food	Professional & Other Places

Cluster 1. ONLY FOR WORKING

Cluster	Cluster	City	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue
1	1	Abidjan	Professional & Other Places	Shop & Service	College & University
2	1	Abu Dhabi	Professional & Other Places	Shop & Service	Food
3	1	Abuja	Professional & Other Places	Food	Nightlife Spot
4	1	Accra	Professional & Other Places	Shop & Service	Nightlife Spot
6	1	Adelaide	Professional & Other Places	Shop & Service	Food
10	1	Amsterdam	Professional & Other Places	Food	Travel & Transport
31	1	Berlin	Professional & Other Places	Shop & Service	Food
49	1	Canberra	Professional & Other Places	Outdoors & Recreation	Arts & Entertainment
50	1	Cape Town	Professional & Other Places	Shop & Service	Arts & Entertainment
55	1	Chicago	Professional & Other Places	Shop & Service	Travel & Transport
57	1	Colombo	Professional & Other Places	Travel & Transport	Food
58	1	Conakry	Professional & Other Places	Travel & Transport	Food
59	1	Copenhagen	Professional & Other Places	Travel & Transport	Food
61	1	Dakar	Professional & Other Places	Food	Shop & Service
65	1	Detroit	Professional & Other Places	Shop & Service	Travel & Transport
66	1	Dhaka	Professional & Other Places	Food	Shop & Service
71	1	Dublin	Professional & Other Places	Outdoors & Recreation	Shop & Service
75	1	Edinburgh	Professional & Other Places	Travel & Transport	Nightlife Spot
76	1	Frankfurt	Professional & Other Places	Shop & Service	Outdoors & Recreation
77	1	Gaborone	Professional & Other Places	Shop & Service	Food
82	1	Hamburg	Professional & Other Places	Shop & Service	Food
84	1	Harare	Professional & Other Places	Shop & Service	Food
89	1	Honolulu	Professional & Other Places	Outdoors & Recreation	Travel & Transport
93	1	Istanbul	Professional & Other Places	College & University	Food
94	1	Jakarta	Professional & Other Places	Food	Outdoors & Recreation
100	1	Karachi	Professional & Other Places	Shop & Service	Food
102	1	Kigali	Professional & Other Places	Shop & Service	Food
103	1	Kingston	Professional & Other Places	Shop & Service	Travel & Transport
111	1	Lagos	Professional & Other Places	Shop & Service	Travel & Transport
131	1	Maputo	Professional & Other Places	Shop & Service	Food
135	1	Milan	Professional & Other Places	Shop & Service	Food
137	1	Minsk	Professional & Other Places	Arts & Entertainment	College & University
138	1	Monterrey	Professional & Other Places	Shop & Service	Food
144	1	Muscat	Professional & Other Places	Food	Shop & Service
152	1	Niamey	Professional & Other Places	Food	Shop & Service
160	1	Panama City	Professional & Other Places	Shop & Service	Food
162	1	Perth	Professional & Other Places	Travel & Transport	Outdoors & Recreation
166	1	Port au Prince	Professional & Other Places	Shop & Service	Food
169	1	Port of Spain	Professional & Other Places	Travel & Transport	Shop & Service
170	1	Prague	Professional & Other Places	Shop & Service	College & University
173	1	Quito	Professional & Other Places	Food	Shop & Service
176	1	Rio de Janeiro	Professional & Other Places	Shop & Service	Food
182	1	San Salvador	Professional & Other Places	Shop & Service	Food
183	1	Sana'a	Professional & Other Places	Food	Shop & Service
186	1	Santo Domingo	Professional & Other Places	Shop & Service	Food
194	1	Sofia	Professional & Other Places	Arts & Entertainment	Food
197	1	Stockholm	Professional & Other Places	Food	Shop & Service
200	1	São Paulo	Professional & Other Places	Shop & Service	Residence

Cluster 2. FIRST SHOPPING (than working)

Cluster	Cluster	City	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue
8	2	Almaty	Shop & Service	Professional & Other Places	Food
13	2	Asunción	Professional & Other Places	Shop & Service	Food
14	2	Athens	Shop & Service	Professional & Other Places	Food
15	2	Atlanta	Shop & Service	Professional & Other Places	Food
20	2	Bandar Seri Begawan	Food	Shop & Service	Professional & Other Places
21	2	Bangkok	Shop & Service	Professional & Other Places	Food
25	2	Basel	Shop & Service	Food	Professional & Other Places
29	2	Belgrade	Shop & Service	Food	Professional & Other Places
30	2	Bengaluru	Shop & Service	Professional & Other Places	Food
34	2	Bishkek	Shop & Service	Professional & Other Places	Residence
36	2	Bogotá	Professional & Other Places	Shop & Service	Food
37	2	Boston	Shop & Service	Professional & Other Places	Outdoors & Recreation
45	2	Buenos Aires	Shop & Service	Professional & Other Places	Food
47	2	Cairo	Shop & Service	Professional & Other Places	Food
48	2	Calgary	Shop & Service	Food	Professional & Other Places
54	2	Chennai	Shop & Service	Food	Professional & Other Places
62	2	Dallas	Shop & Service	Professional & Other Places	Food
74	2	Düsseldorf	Shop & Service	Professional & Other Places	Nightlife Spot
81	2	Guatemala City	Shop & Service	Professional & Other Places	Food
90	2	Houston	Shop & Service	Food	Professional & Other Places
91	2	Hyderabad	Shop & Service	Food	Professional & Other Places
101	2	Khartoum	Professional & Other Places	Shop & Service	Food
106	2	Kolkata	Shop & Service	Food	Professional & Other Places
108	2	Kuwait City	Shop & Service	Professional & Other Places	Food
109	2	Kyiv	Shop & Service	Professional & Other Places	Food
122	2	Luanda	Shop & Service	Professional & Other Places	Food
123	2	Lusaka	Shop & Service	Professional & Other Places	Food
124	2	Luxembourg	Shop & Service	Food	Professional & Other Places
128	2	Manama	Professional & Other Places	Shop & Service	Food
133	2	Mexico City	Shop & Service	Food	Professional & Other Places
139	2	Montevideo	Shop & Service	Professional & Other Places	Food
142	2	Mumbai	Shop & Service	Professional & Other Places	Food
143	2	Munich	Shop & Service	Nightlife Spot	Food
154	2	Noumea	Shop & Service	Professional & Other Places	Food
155	2	Nuremberg	Shop & Service	Food	Professional & Other Places
158	2	Ottawa	Shop & Service	Professional & Other Places	Food
163	2	Philadelphia	Shop & Service	Professional & Other Places	Food
166	2	Pointe-à-Pitre	Shop & Service	Professional & Other Places	Food
167	2	Port Louis	Shop & Service	Professional & Other Places	Food
177	2	Riyadh	Shop & Service	Professional & Other Places	Arts & Entertainment
180	2	San José	Shop & Service	Travel & Transport	Professional & Other Places
186	2	Sarajevo	Shop & Service	Professional & Other Places	Food
188	2	Seoul	Shop & Service	Food	Professional & Other Places
199	2	Sydney	Professional & Other Places	Shop & Service	Food
204	2	Tashkent	Shop & Service	Professional & Other Places	Food
205	2	Tbilisi	Professional & Other Places	Shop & Service	Travel & Transport
206	2	Tegucigalpa	Shop & Service	Professional & Other Places	Food
207	2	Tehran	Shop & Service	Professional & Other Places	Food
208	2	Tel Aviv	Shop & Service	Food	Residence
213	2	Tunis	Professional & Other Places	Shop & Service	Food
214	2	Vancouver	Shop & Service	Professional & Other Places	Food
219	2	Warsaw	Shop & Service	Professional & Other Places	Travel & Transport
221	2	Wellington	Shop & Service	Professional & Other Places	Travel & Transport
222	2	Windhoek	Shop & Service	Food	Professional & Other Places
226	2	Yaounde	Shop & Service	Professional & Other Places	Food

REFERENCES

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