



Finding new locations for a new café chain in Cologne



Agenda

- Business plan
- Data acquisition
- Data refinement
- Results

- Introducing a new café chain into Cologne
- Open up to twenty new cafes in short succession
- Be highly visible to customers - open the cafes in the vicinity of tram stations considering existing competition and sites with a high number of potential customer

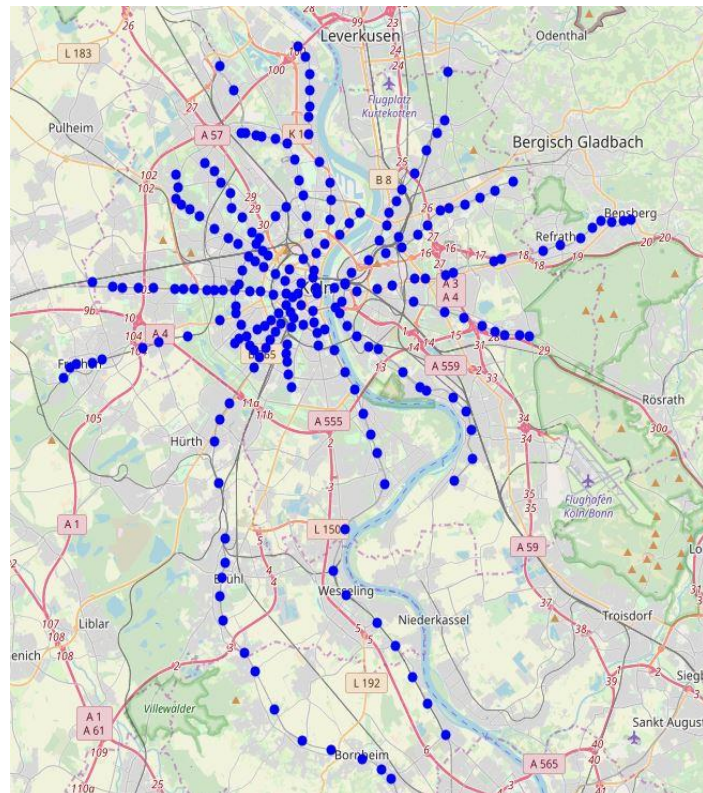
Data sources used for this analysis:

- Location data on tram stations from open data archive from KVB
<https://online-service.kvb-koeln.de>
- Location data from Foursquare API
 - Competition: bakeries and cafes
 - Sites with potentially high customer number: universities and schools
 - <https://api.foursquare.com>



Data refinement: tram station data

- Delete unneeded rows from data with information on bus stops
- Delete unneeded columns and transform remaining columns to a easily processable format
- Perform a visual inspection of the station data by printing it on a map
 - Formalize passing and/or failing criterions for the data in advance:
 - Many station in the city itself
 - Fewer stations in the surroundings
 - Some kind of line pattern discernable

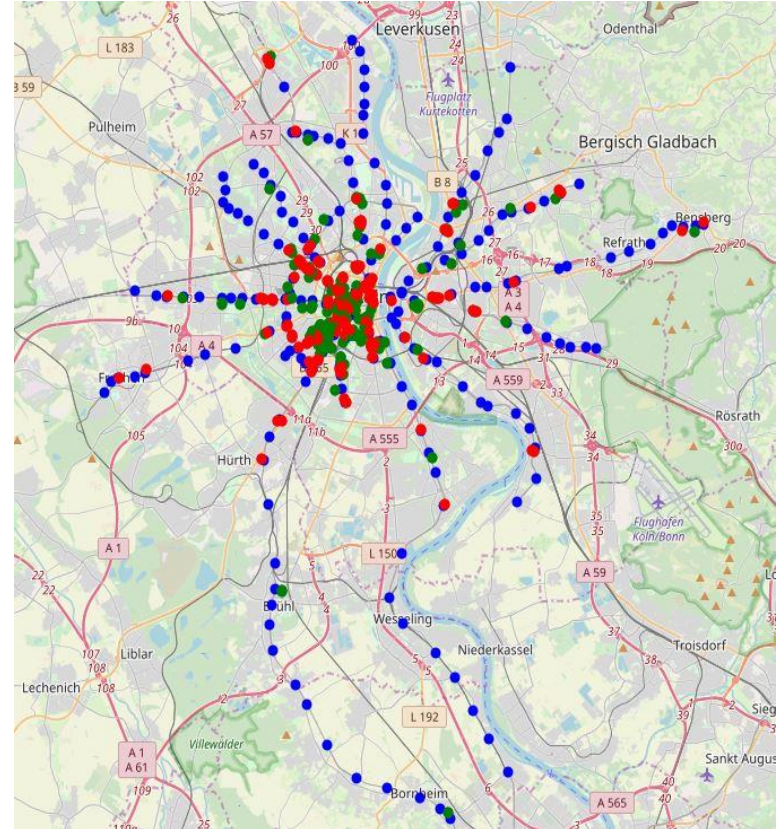




Data refinement: location data

- Get for every station data on potential competition from other bakeries or cafes in a radius of 150m. Depicted in red.
- Get for every station data on potential sites of a high potential customer number like universities and schools in a radius of 300m. Depicted in green.
- Calculate a “suitability index” for every station:

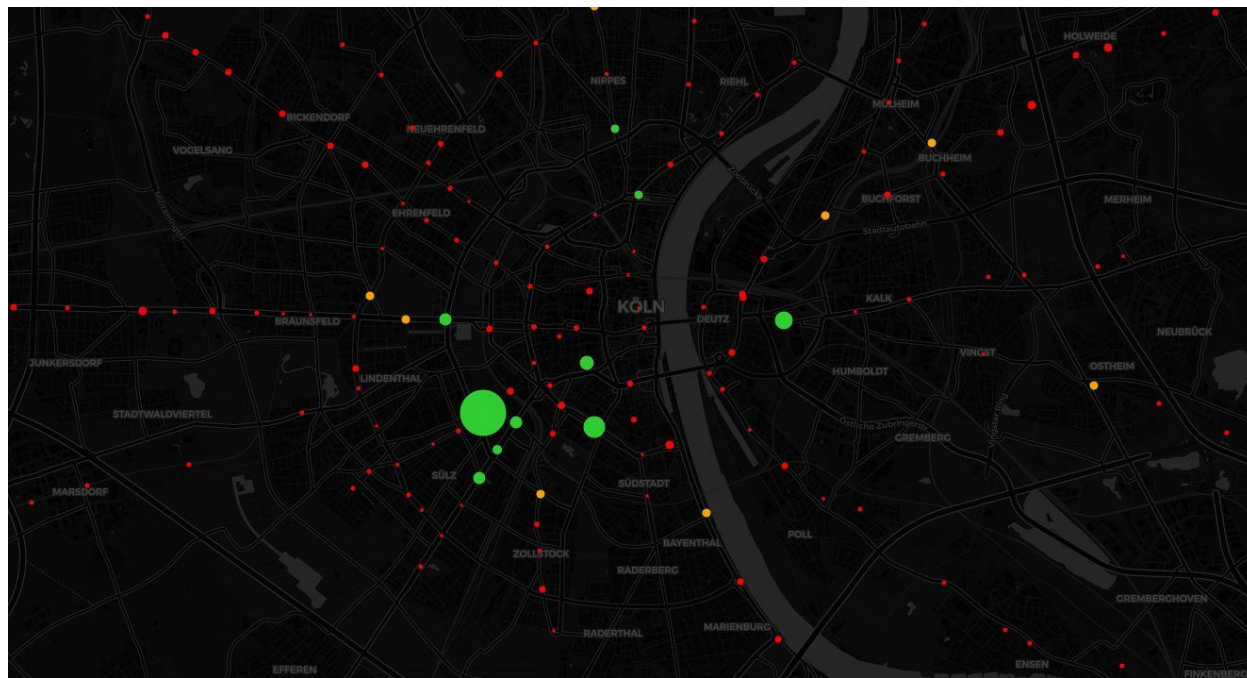
$$\frac{\text{Number of tram lines stopping at the station} + \text{number of high customer sites}}{\text{number of competitors}} = \text{Index}$$





Results: Data fusion

- Combine the data of tram stations with the suitability index (location data on customers and competition) to an easily understandable map
- The size of the station marker indicates the suitability for a new café of the brand.
- Green: Ten most suitable location
- Orange: Ten second most suitable locations
- Red: All other stations



- The 10 most recommended stations to open a new café of the brand are

	Name	Long	Lat	Lines count	Distance	Comp	Cust	Suitability
54	Universität	6.9312003766	50.9259899857	1	2.475556	0.0	22.0	23.0
11	Ullrepforte	6.951437134	50.9243235691	2	1.677367	0.0	8.0	10.0
31	Deutz Technische Hochschule	6.9859264567	50.9365857842	2	1.866090	0.0	6.0	8.0
2	Poststr.	6.9500805214	50.9316916582	4	1.025377	0.0	2.0	6.0
18	Eifelwall	6.937176778	50.924873049	1	2.215972	1.0	9.0	5.0
49	Universitätsstr.	6.9242751929	50.936653862	2	2.559527	0.0	3.0	5.0
52	Arnulfstr.	6.9305212496	50.918530254	1	3.050616	0.0	4.0	5.0
51	Weißhausstr.	6.9337951463	50.921716127	1	2.633557	1.0	6.0	3.5
104	Lohsestr.	6.9551338824	50.9585057929	2	2.268666	0.0	1.0	3.0
25	Ebertplatz	6.9595370283	50.9510131543	2	1.408531	0.0	1.0	3.0

- The data clearly shows, that the best locations for opening a new café are in the city itself. There are the most sites with a high number of potentially customers even though there are also the most competitors.
- The best location for opening a new café is, as could be expected, the station at the university, since there are the most potential customers available.