

# AIRBNB Case Study

Presented to Data Analytics Team

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# Objective

- Improve our shared understanding about market
- Improve our shared understanding about our customers
- Provide recommendation to various department
- To be prepared for the change post pandemic

# Background

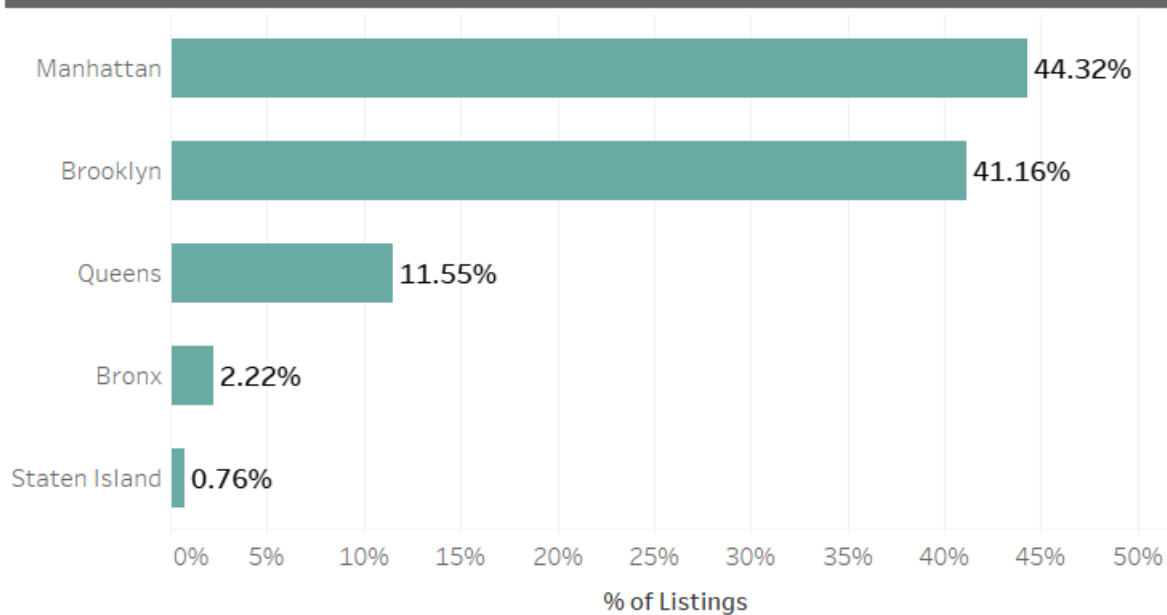
- Major decline in revenues due to pandemic
- Travel Restriction are lifting
- People are travelling more often

# Key Recommendations – for Business Decisions

- Target the Top 3 Districts
- Target Customers for Short Term Stay
- Special Attn. to Top 5 Neighborhoods in Each District
- Partner with Hosts with most Available Listings
- Define Pricing Strategy based on Avg. & Median Price
- Investigate Listings Not Available for Renting ( $\text{Available}_{365} = 0$ )

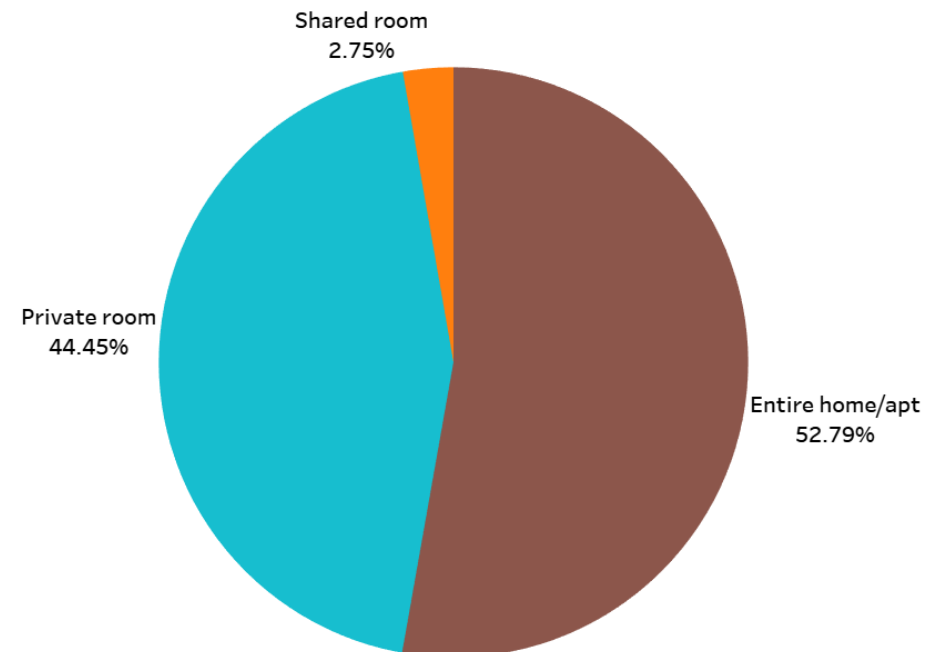
# #1 – % Distribution based on Listing / Room Type

Percentage of Total listings By District



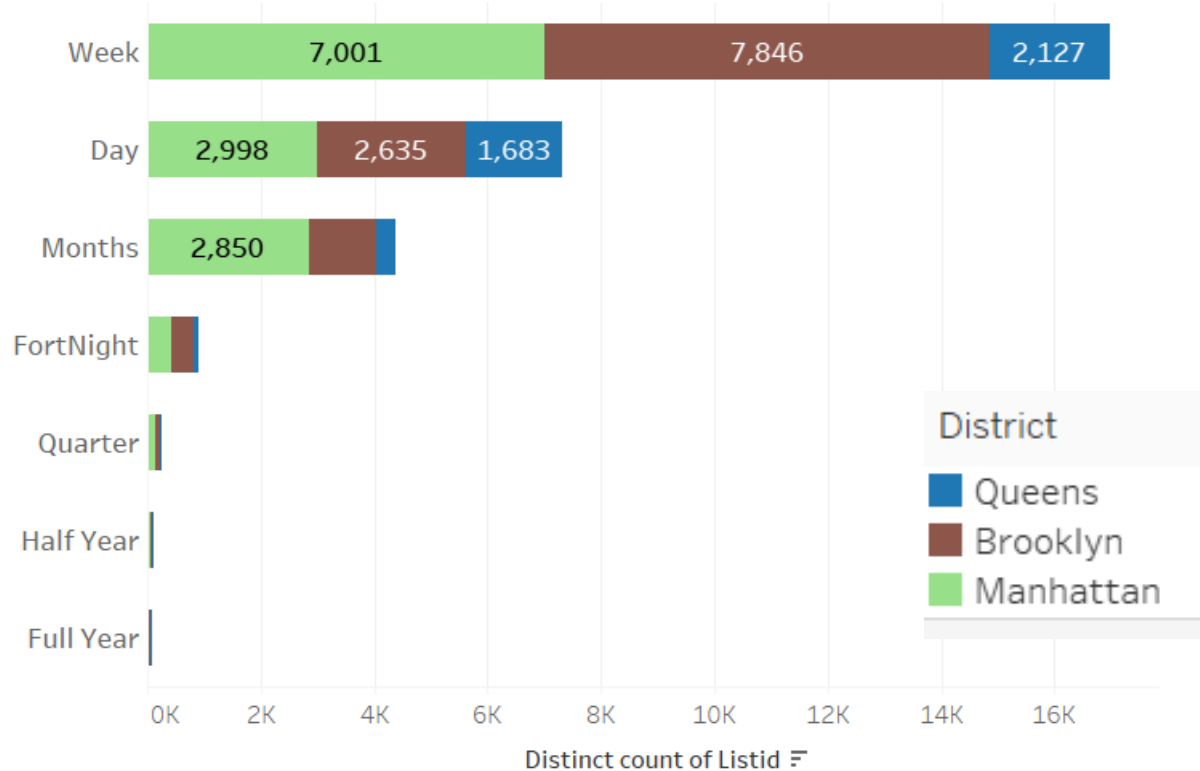
We can Exclude **Bronx & Staten Island** from our efforts since together they are less than 3% of the Listings

Pie Chart is Used since the No. of Categories is less for Room Type



## #2 – Listings Distribution by Min-nights & Districts

Total Available Listing by Minimum-Nights (District Wise)

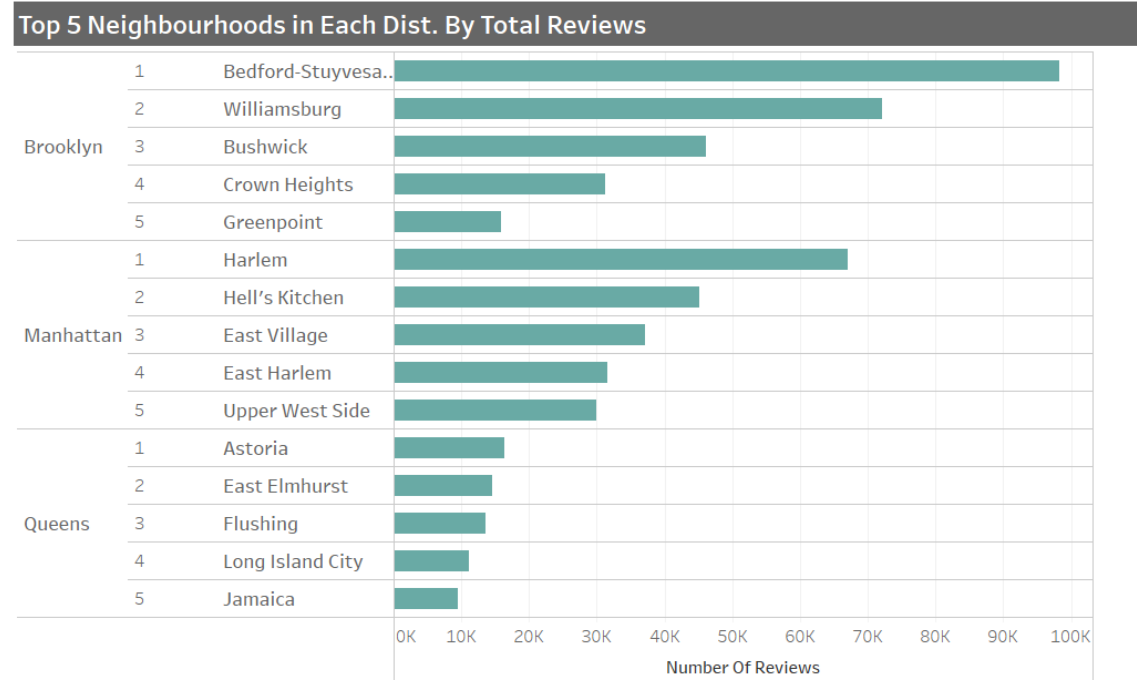
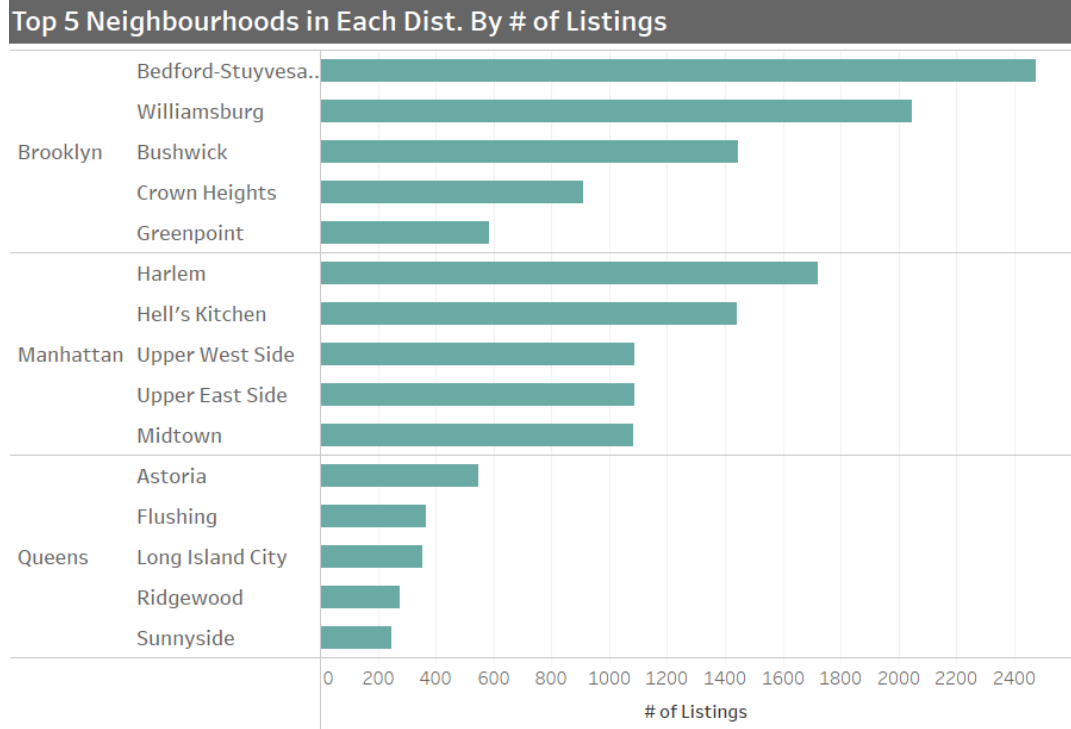


It is Recommended to Target Customers or Create marketing Campaigns for **Short Term Stay**

Stacked Bar Chart to Represent District Wise Absolute #

Note: Categorical Bins were created for Minimum\_Nights

# #3 – Top 5 Neighbourhoods in each Dist.

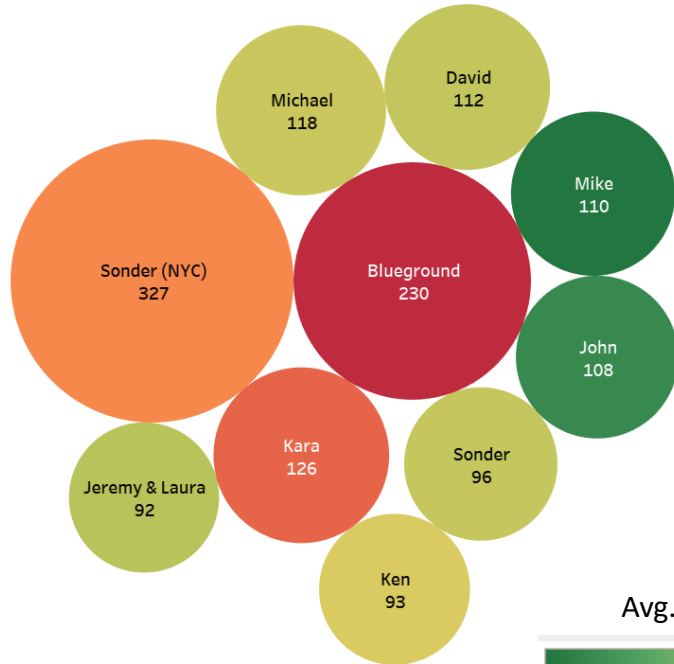


**A Calculated field based on Index() was used to Identify the Top N (in Tableau)**  
**Indexing is restarted for each District**  
**The Listing is Filtered based on the same for Top 5**

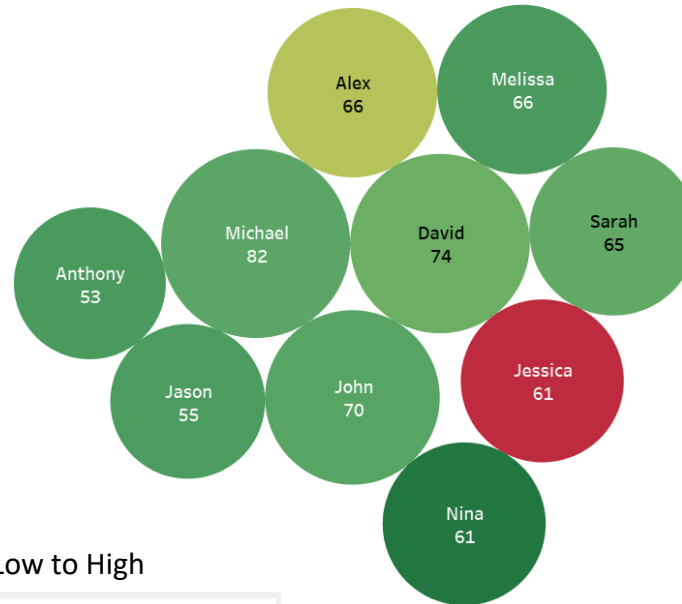


# #4 Listings by Host (District Wise) and Avg. Price

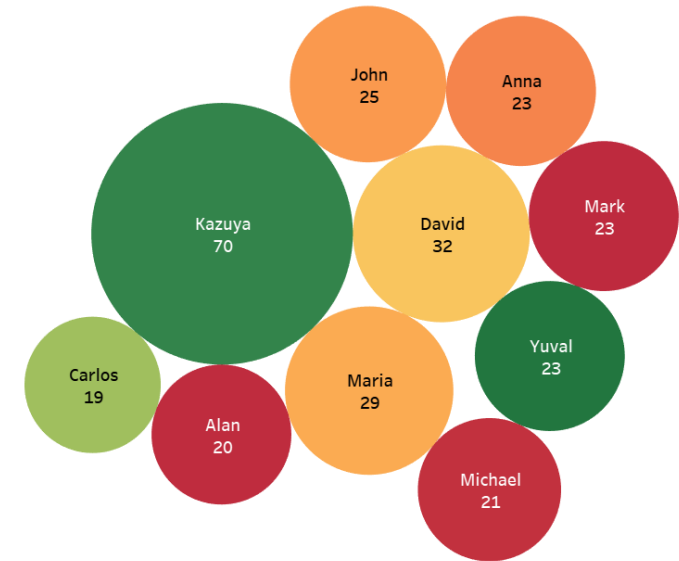
Top 10 Hosts in Manhattan Based on # of Listings (Available)



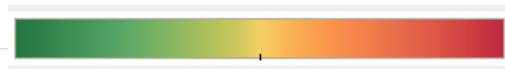
Top 10 Hosts in Brooklyn Based on # of Listings (Available)



Top 10 Hosts in Queens Based on # of Listings (Available)



Avg. Price Low to High



**Leverage Hosts With more # of Listings and get into a Long term partnership or Agreement**

**Size of the Bubble indicates the # Of Listings | Color indicates the Price Quoted by the Host**

# #5 – Price for Stay Options

## Median Price (For Various Stay Options) -District Wise

Min Stay	Brooklyn	Manhattan	Queens
Day	80	125	69
Week	300	490	240
FortNight	1,067	1,386	825
Months	2,340	5,250	1,410
Quarter	5,841	9,000	3,125
Half Year	18,000	15,700	20,610
Full Year	61,368	43,500	81,260

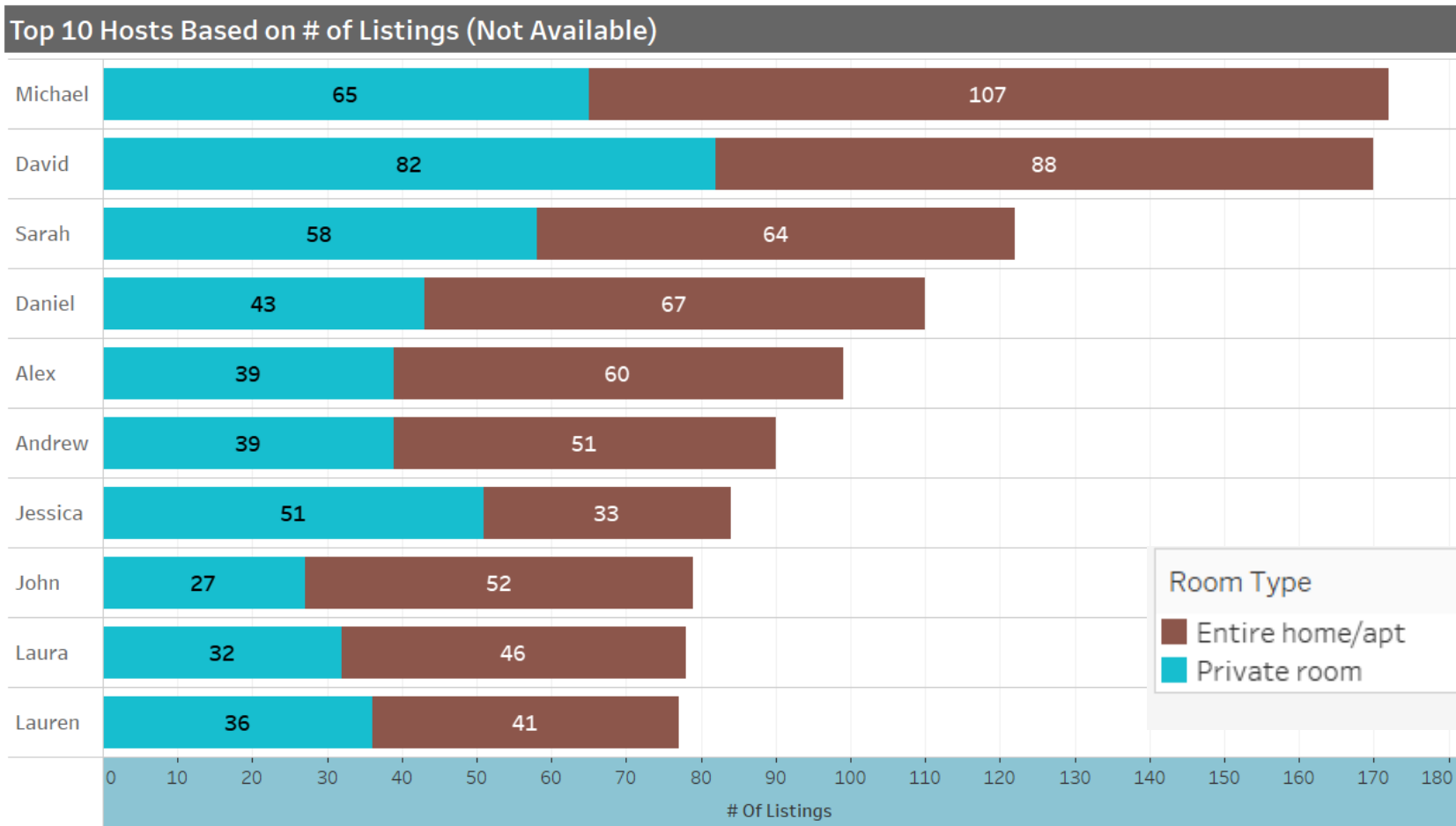
## Median Price (Percent Diff) -District Wise

Min Stay	Brooklyn	Manhattan	Queens
Day	0.0%	56.2%	-13.8%
Week	0.0%	63.3%	-20.0%
FortNight	0.0%	29.9%	-22.7%
Months	0.0%	124.4%	-39.7%
Quarter	0.0%	54.1%	-46.5%
Half Year	0.0%	-12.8%	14.5%
Full Year	0.0%	-29.1%	32.4%

**Manhattan is Costly for Short Term Stay / Queens is Costly for Long Term Stay (Comparatively)**

**Percent Diff** is used to Show the Extent of Variation between Districts  
The Values are Shown as +/- in Comparison with Brooklyn

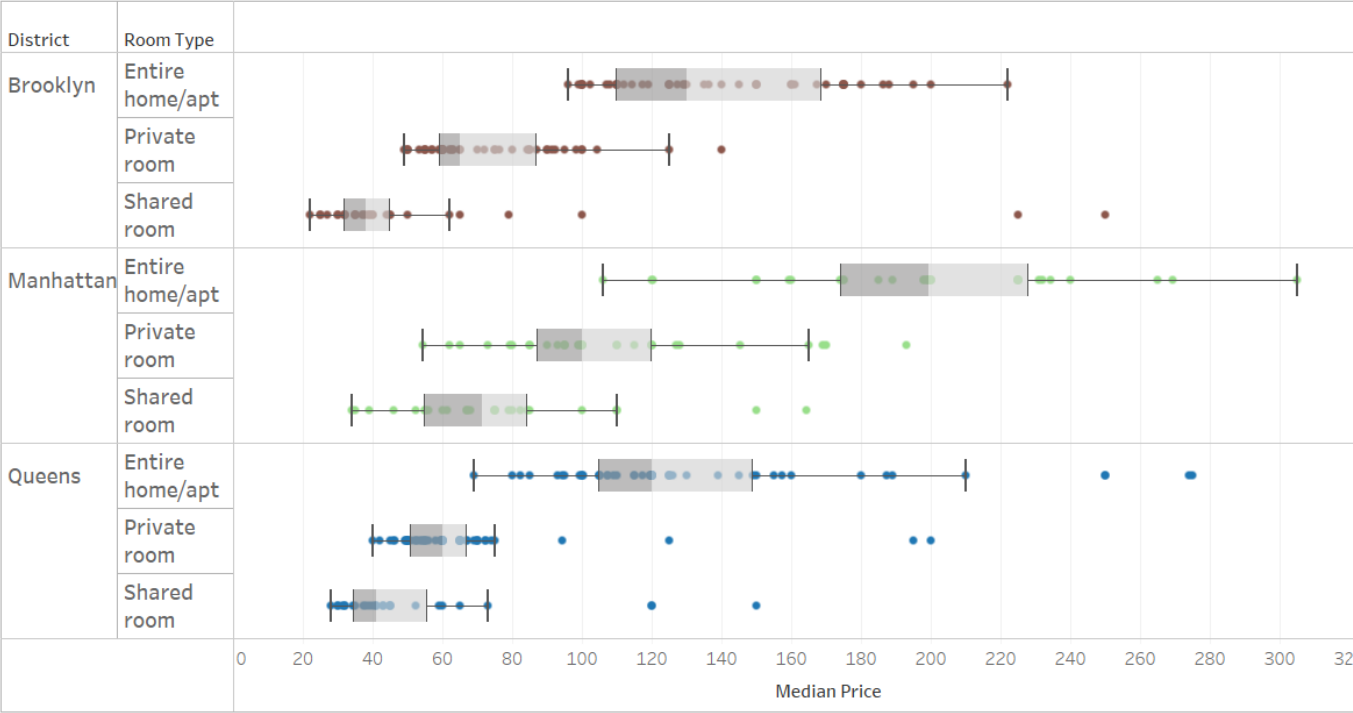
# #6 – Investigate Listings Not Available for Renting



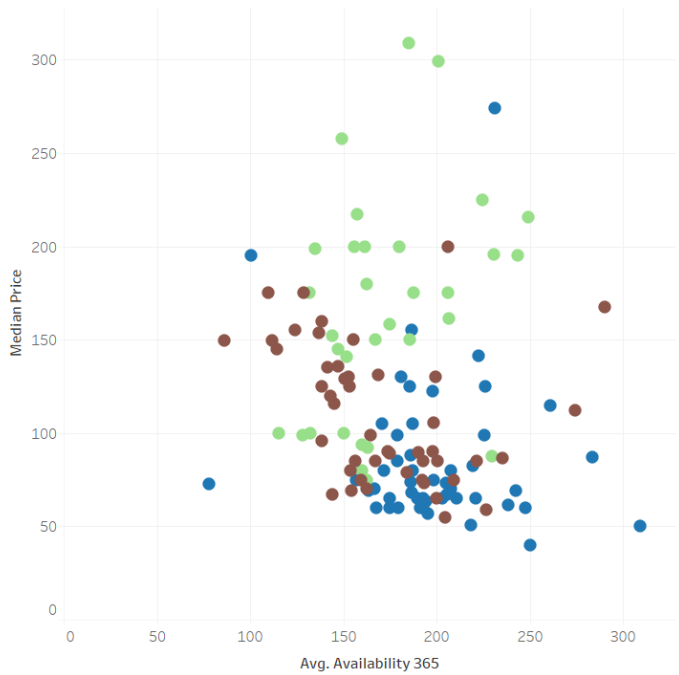
**Many Hosts Own Properties (Listed) but are not Available for Rent (Available\_365 = 0)**  
**Need to Investigate if they are occupied / Sold to New Hosts / Do not want to Rent Out ??**

# Other Analysis Performed (not used in Report Out)

Median Price Range for Different Room Types / District

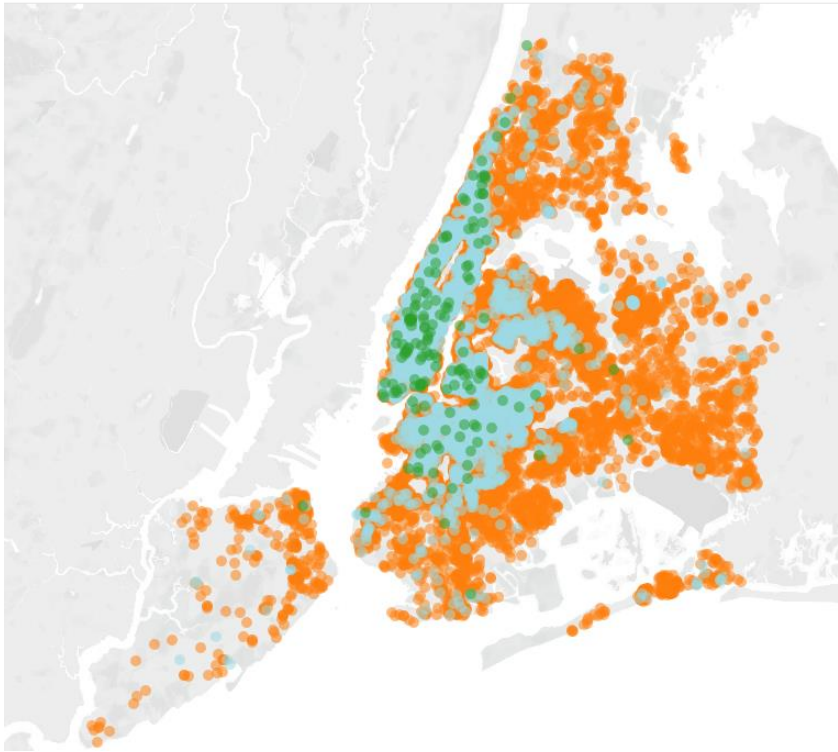


Median Price vs. Availability

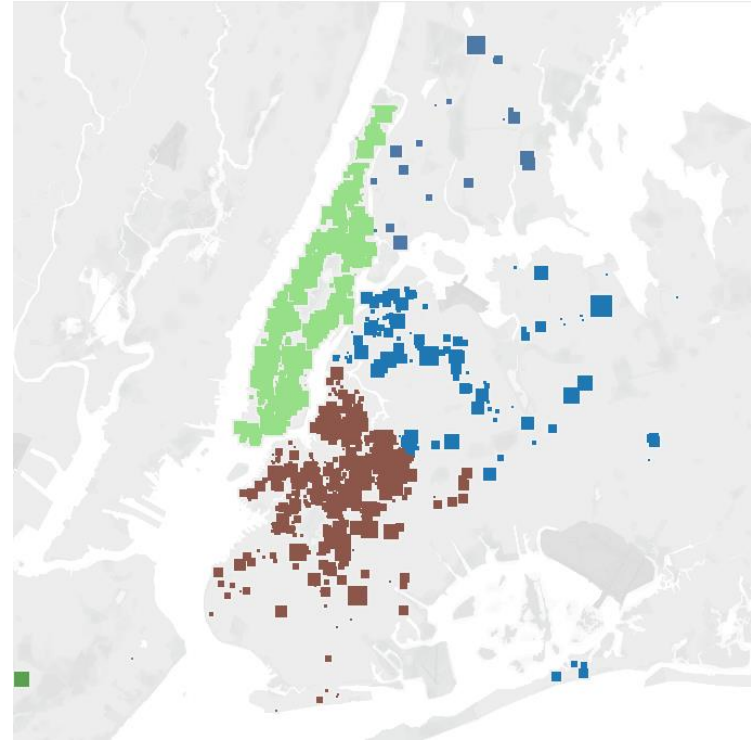


**Various Analysis were performed, but not used in Report Out**  
**Since there were no significant narrative identified – that could drive Decisive Action**

# Visualizing Using Maps



Min-Stay Distribution



Reviews / Month in Each location

**Though Maps were used during Analysis (were not used in Business presentation)**

# Analysis Methodology

- Data Was prepared for Analysis
  - All Blanks / Errors were eliminated
  - Additional Categorical Variable was created for Bins of Numerical Measures
- Analysis
  - Various Charts were created with Different Dimensions and measures
  - Appropriate Aggregations were used
  - Some charts that did not provide any major insights were not used in Business Slides
- Report Out
  - Key Recommendations are shared with User Exp. And operations Leaders

**For Additional Details Methodology Document is enclosed**