

**airbnb**  
**NEW YORK**

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# Agenda

## Problem Statement:

Suppose that you are working as a data analyst at Airbnb. For the past few months, Airbnb has seen a **major decline in revenue**. Now that the restrictions have started lifting and people have started to travel more, Airbnb wants to make sure that it is **fully prepared** for this change.

## End Objective :

To prepare for the next best steps that Airbnb needs to take as a business, you have been asked to **analyze a dataset** consisting of various Airbnb listings in New York

## Pointers In Presentation:

- Different **Neighborhoods** and their Performance with respect to **Median Review Per Month**  
*(Average is an alias used for median in this analysis)*
- Neighborhoods to Focus *based on* **Best and Worst Performing**.
- Insights based on different **Room types**.
- Insights based on different **Price segments**.
- Insights based on **minimum Nights stay required** in a Listing.





**221**  
**Neighborhoods**



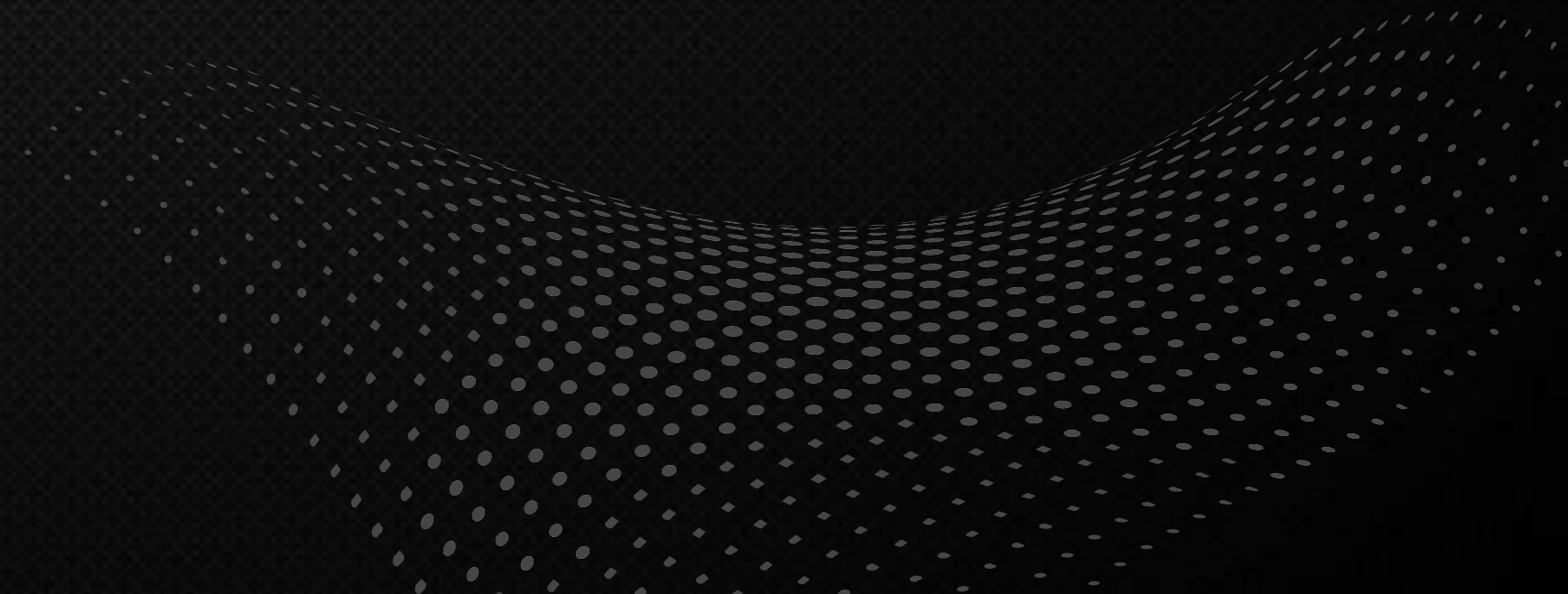
**48k AirBnBs**  
**37k hosts**



**17k Inactive**  
**AirBnBs**

# The NY Market Size

New York has high potential for  
attracting guests





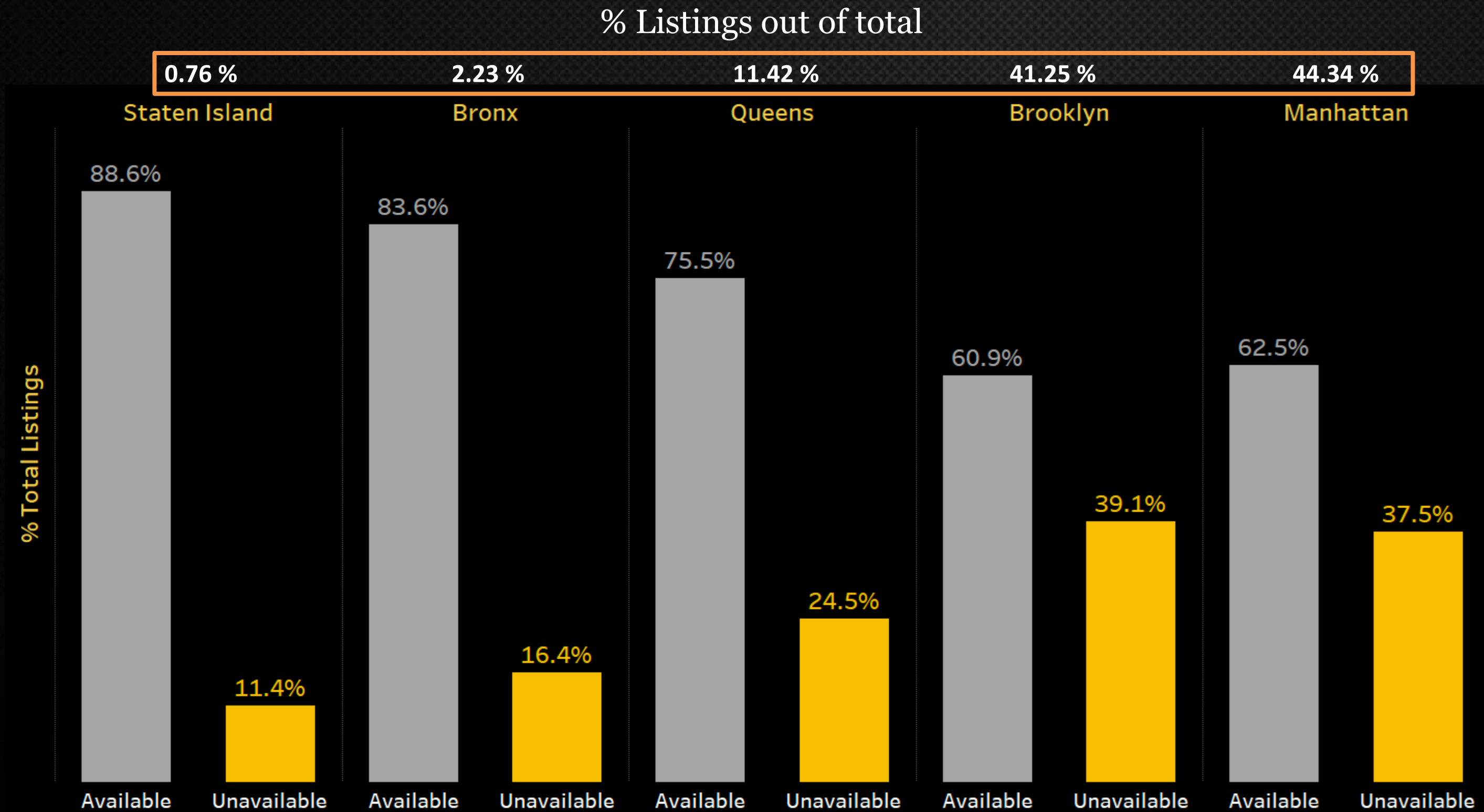
# Increase in Total Active Listing Percentage from previous year



There's an **upward trend** in  
New host acquisition

Business has seen most  
growth in **2018 to 2019**

# Active / Inactive Listings



**Manhattan and Brooklyn** have the most host listings

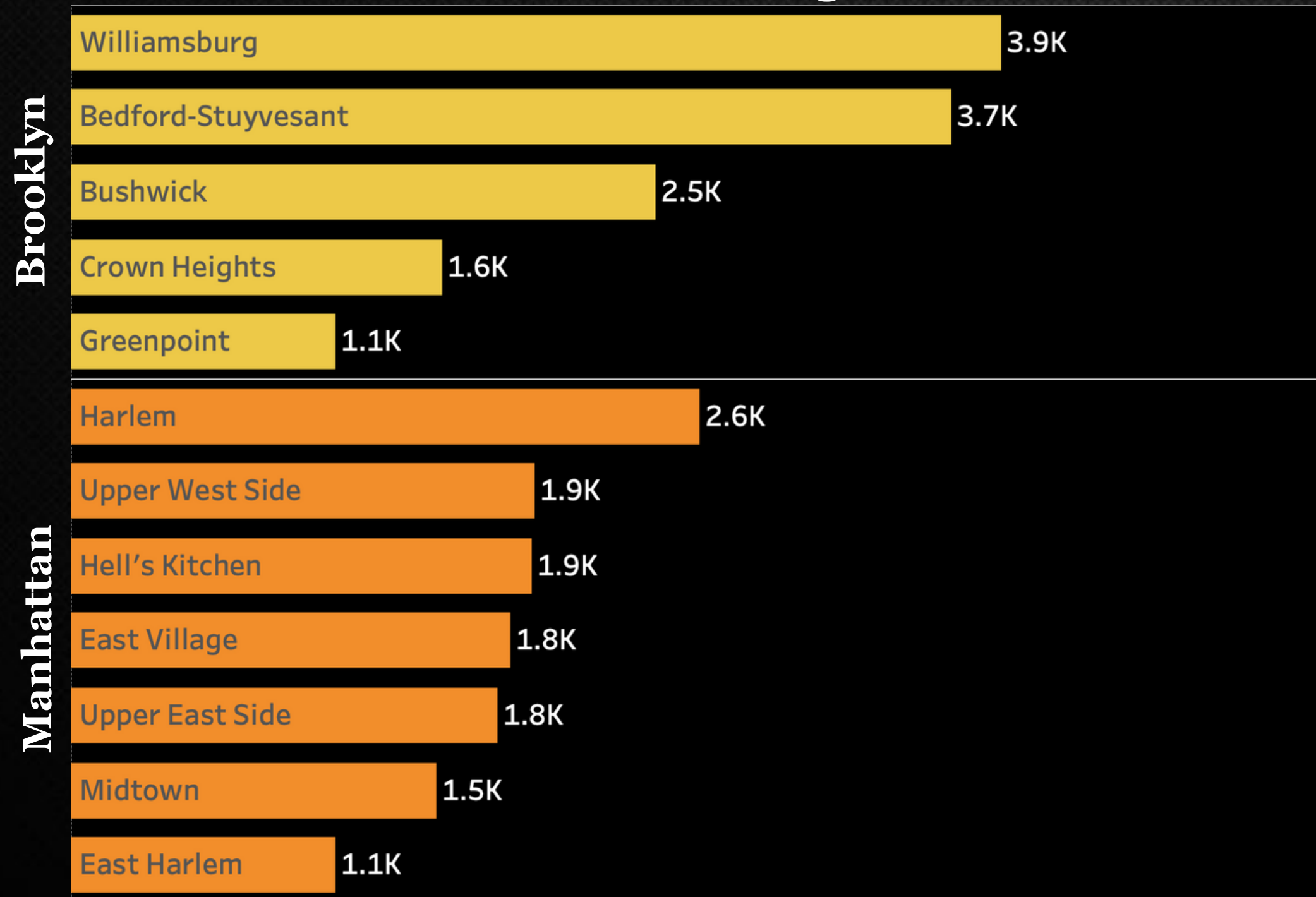
However, we can also observe that both have a **significant number of unavailable hosts.**



# Neighbourhoods

## Top Neighbourhoods in Top Neighbourhood Groups

### Total Listings

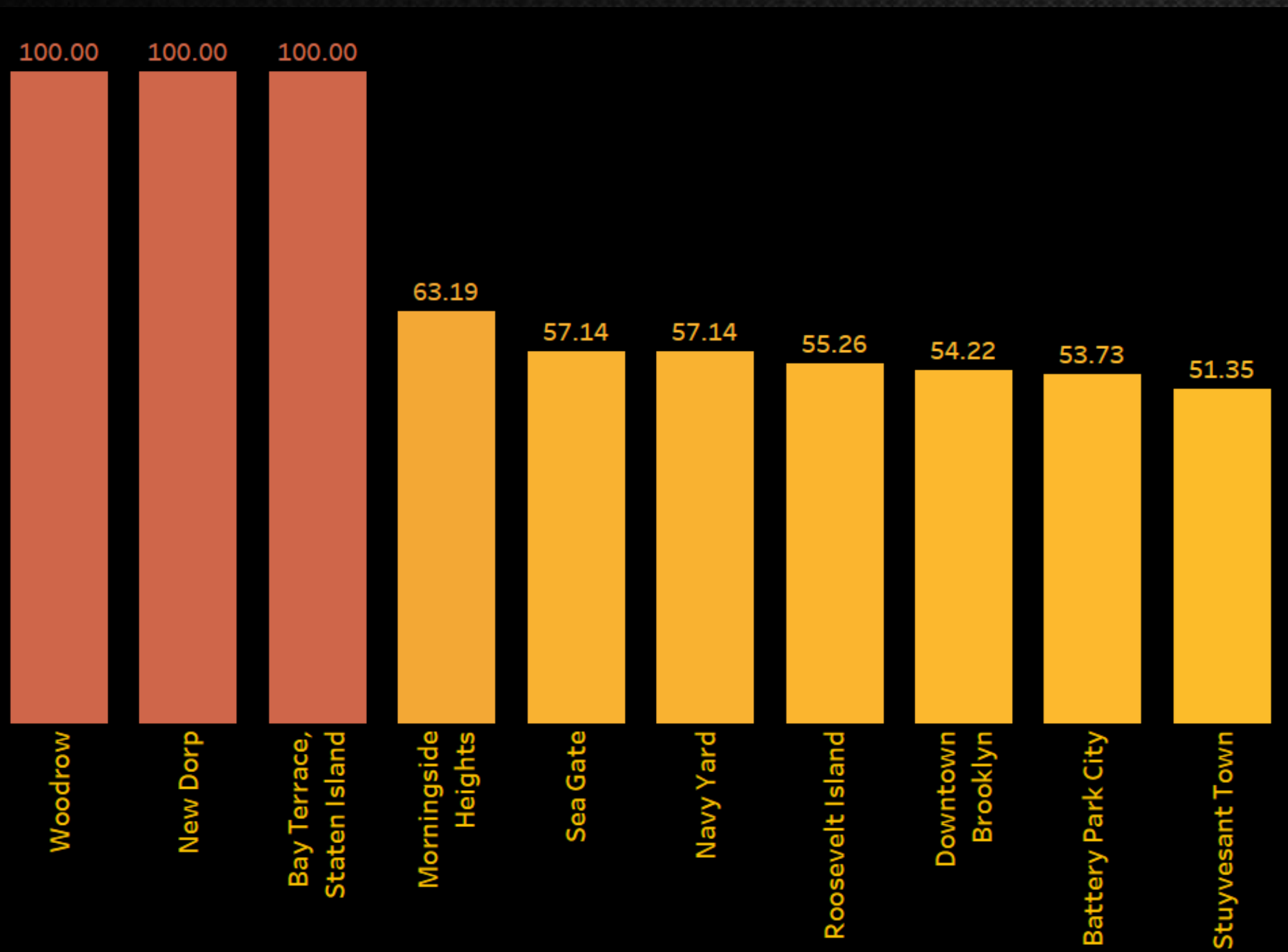


**Manhattan and Brooklyn** are two of the most popular neighbourhood groups in New York.

Because of their strategic location, **they attract a huge number of people.**



# Top Inactive Neighbourhoods and hosts



## Top 10 Hosts with no active listings

Host Id

15787004

5

24831061

8

32545798

5

51596474

12

51913826

8

100238132

12

160495098

5

180212824

5

187487947

6

193502084

8

**15,601 hosts, or 41.9%** of all hosts. Are **not accepting any reservations**

Suggestion:

The hosts which listed their properties but aren't accepting any reservations can either be **removed from the list.**

Or we can survey these hosts to **find out the reason behind it.**

# Most Inactive Neighborhoods Manhattan & Brooklyn

These are the **Top 3 Neighborhoods** in Manhattan and Brooklyn With most inactive Airbnb's

## Brooklyn

Williamsburg

1,864

Bedford-Stuyvesant

1,229

Bushwick

1,011

## Manhattan

Harlem

922

East Village

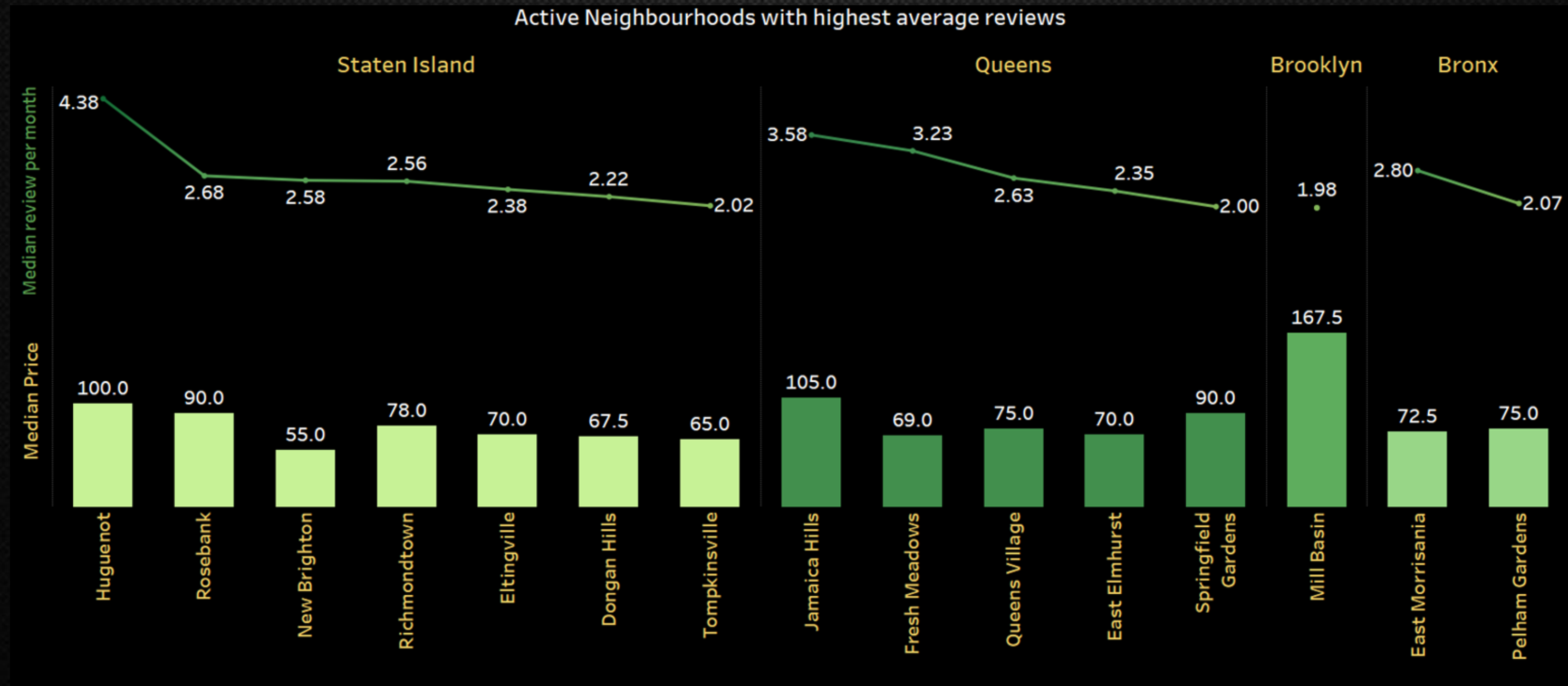
895

Upper West Side

874



# Neighbourhoods to Focus



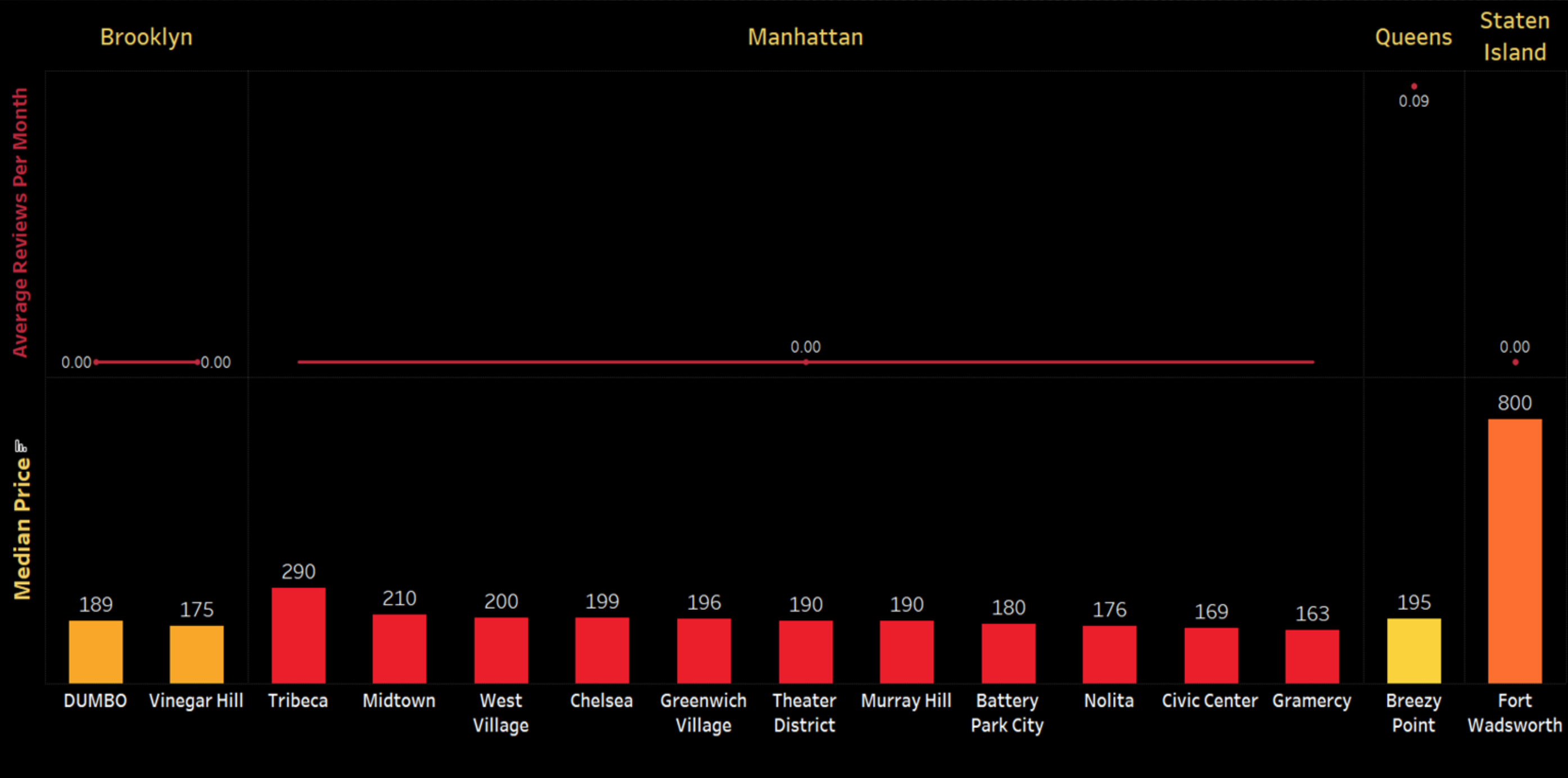
## Manhattan and Brooklyn:

- **Most Hosts**
- **Low Average Review**

## Staten Island, Queens & Bronx:

- **Less Hosts**
- **High Average Review**

# Neighborhoods Worst Performing



Total Neighborhoods	
Bronx	5
Brooklyn	23
Manhattan	22
Queens	4
Staten Island	9

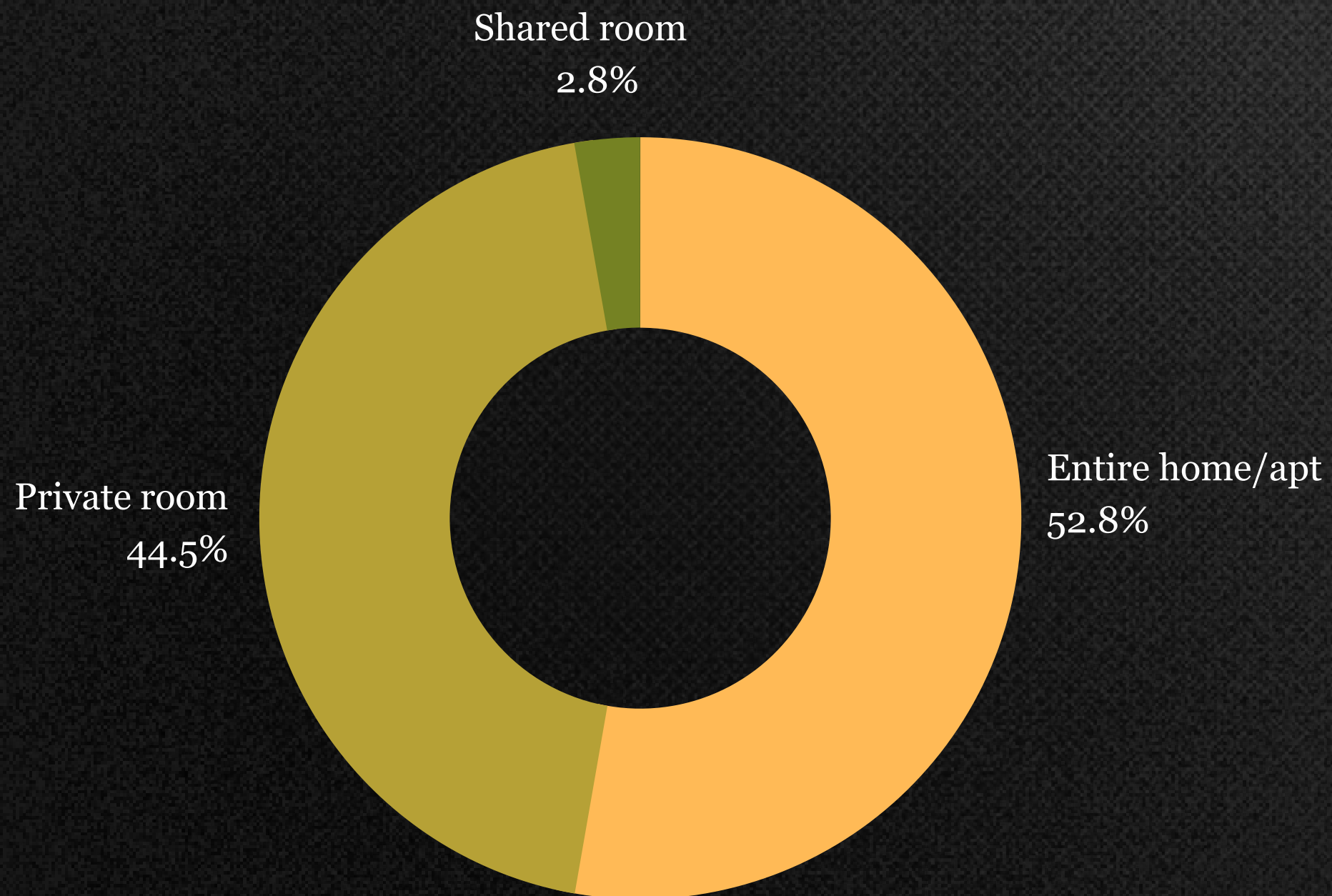
## Suggestion:

Either **Remove** the Airbnb's in these Neighborhoods **or** **conduct a survey** to understand and provide a solution for it.

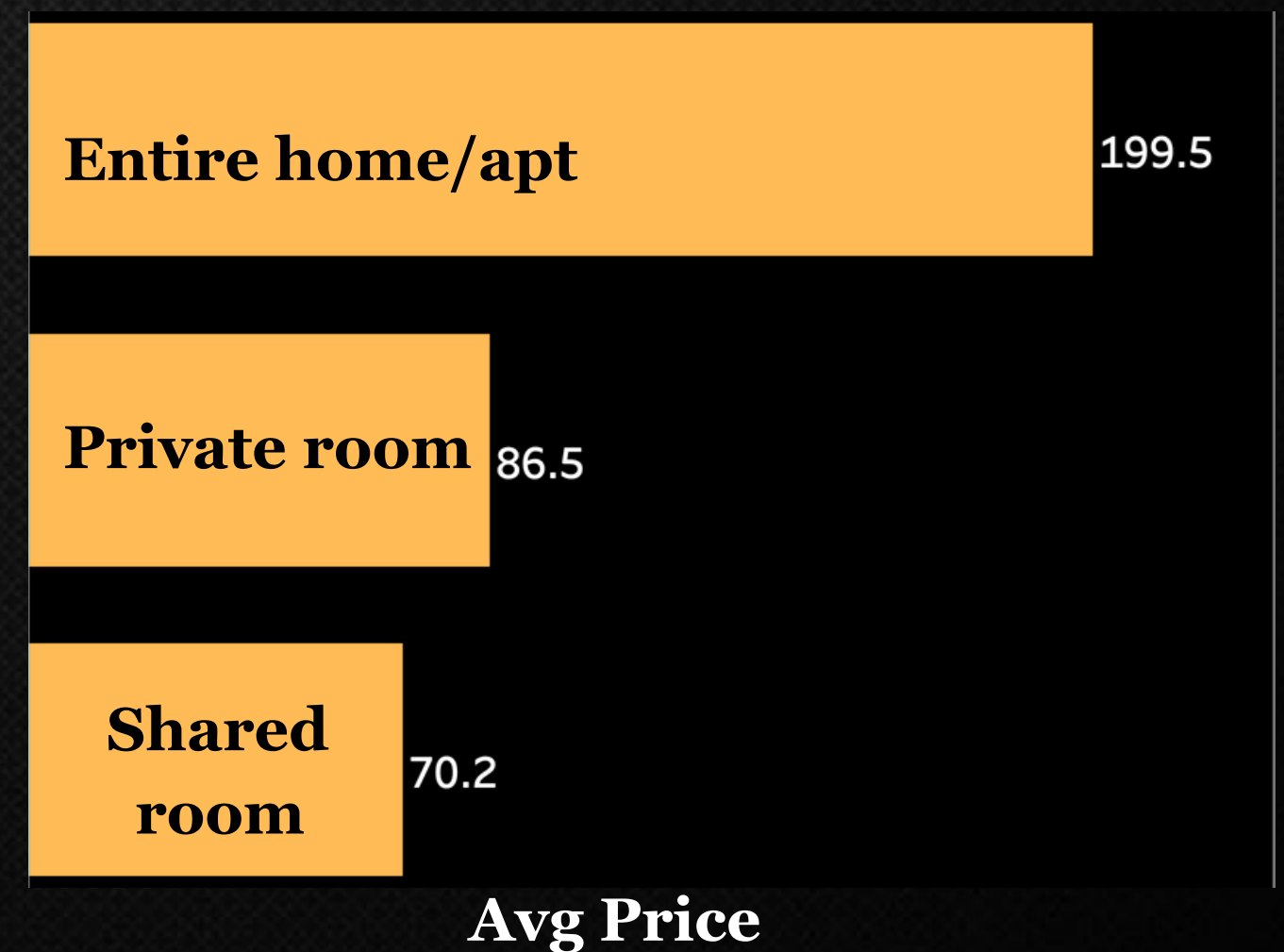
A total of **63 Neighborhoods** have average reviews **per month** **< 0.1**



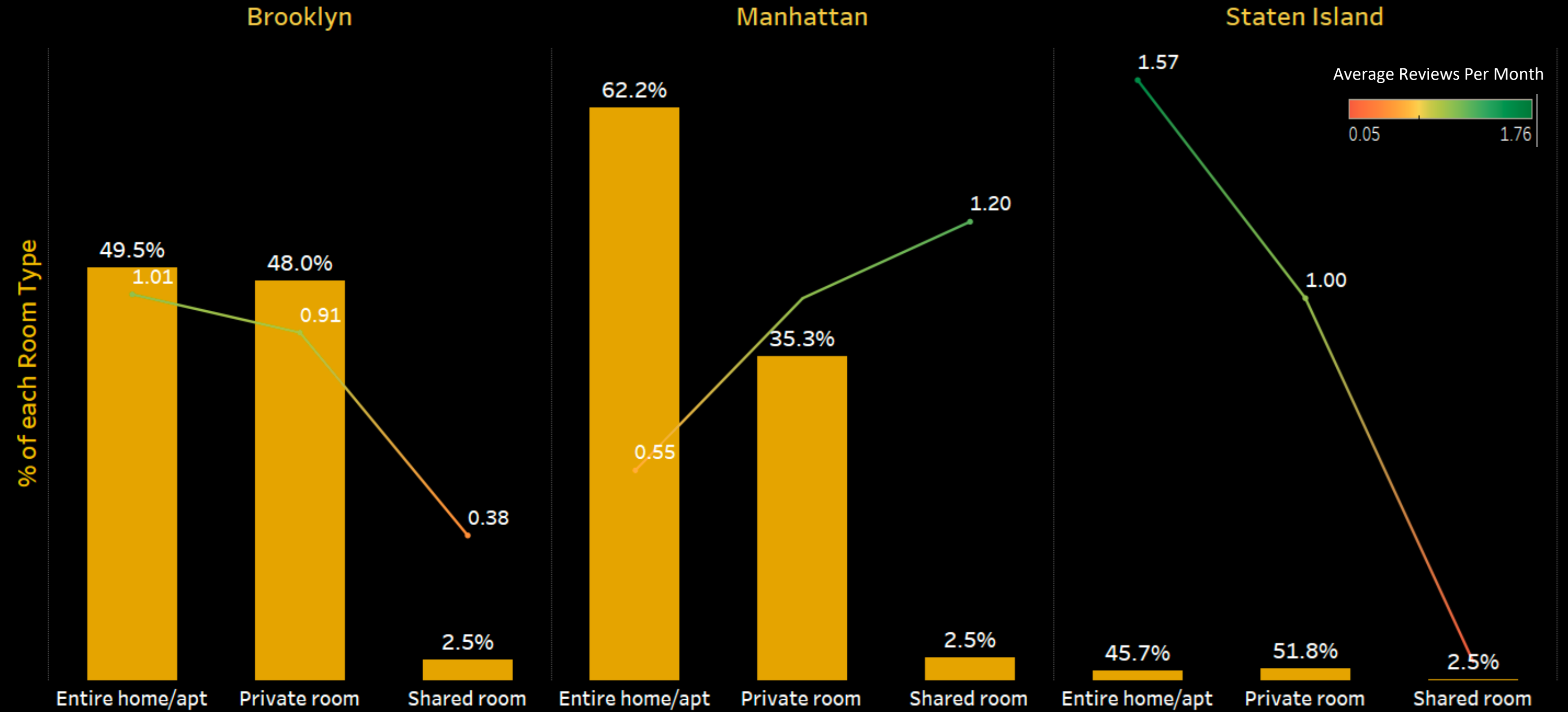
# Room Types



**Majority** of Listings are **entire homes/apartments**, while **shared rooms** are **very minimum** in comparison



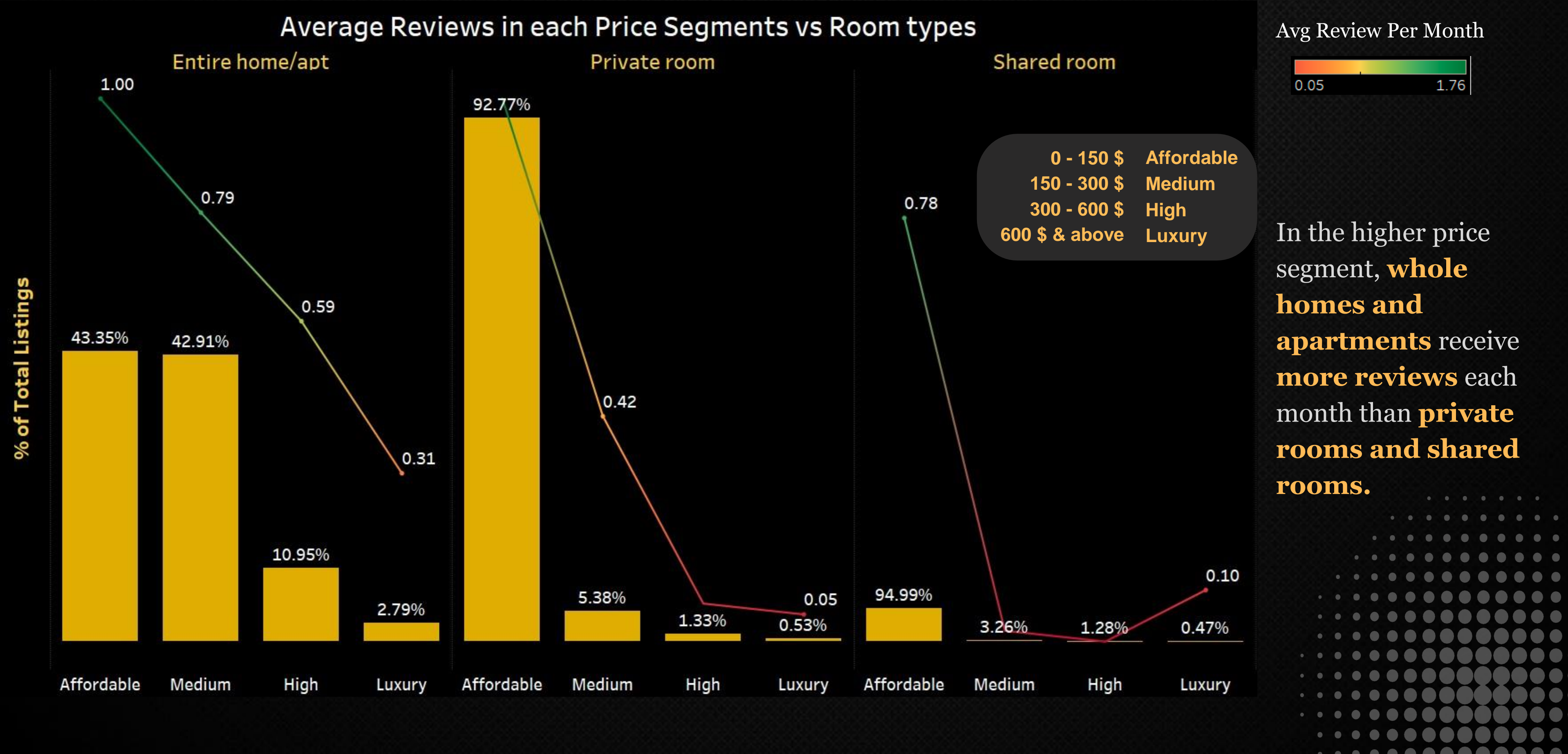
# Average Reviews per Month for each Room Type in Neighbourhoods



Even though **Brooklyn** and **Manhattan** are in **central New York**.  
People in **Manhattan** are **usings more shared rooms** on an average every month, which is a counter to the trend.

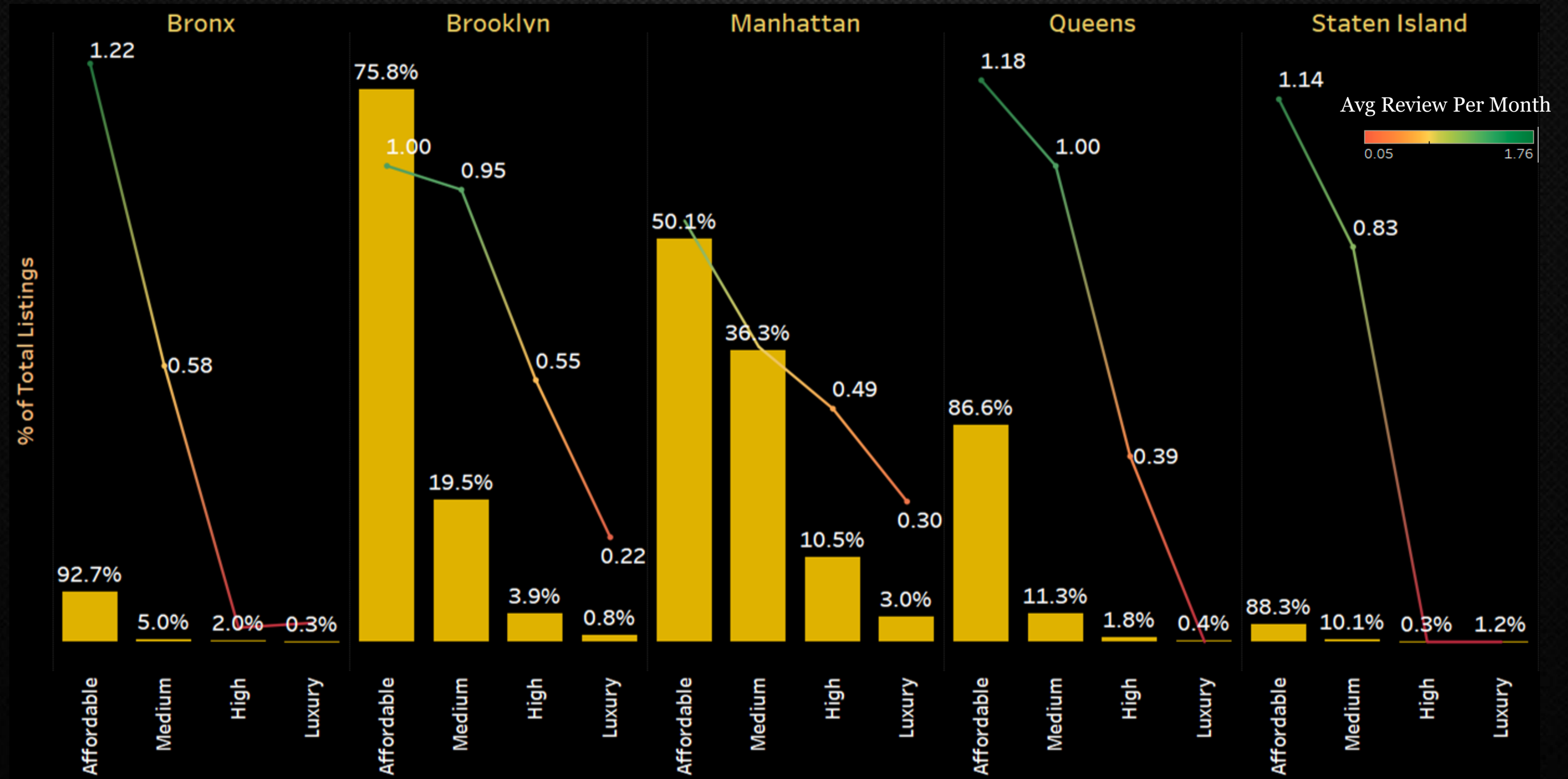


# Average Reviews in each Price Segment vs Room Types





# Price Range vs Neighbourhood Groups



In **Brooklyn and Manhattan**, Airbnb's in the **High and Luxury pricing** ranges are **preferred** above other neighborhoods, which almost never receive any ratings.



# Recommendations

Encourage hosts to keep minimum stay required between 1 to 5 nights as it is preferred by large number of customers.

## Manhattan:

- Entire Home/apt- Focus more on listings in **Affordable, Medium & High** price segments
- Private Rooms- Focus more listings in **Affordable & Medium** (*min. 1-2 nights stay*) price segments
- Shared Rooms- Focus more listings in **Affordable, Luxury & Medium**(*min. 11-30 nights stay*) price segments

## Brooklyn:

- Entire Home/apt- Focus more on in **Affordable & High** price segments
- Private Rooms- Focus more on listings in **Affordable** price segment having **minimum stay** required of **1 or 2 nights**
- Shared Rooms- Focus more on listings in **Affordable** price segment. **Limit** acquiring **other price segment** listings.

## Queens:

- Entire Home/apt- Focus more on listings in **Affordable, Medium & High**(*min. 1-2 nights stay*) price segments
- Private Rooms- Focus more on listings in **Affordable** price segment with min. stay required of **1 to 2 nights**
- Shared Rooms- Focus more on listings in **Affordable** price segment with min. stay required of **1 to 2 nights**

## Bronx & Staten Island:

- Entire Home/apt- Focus more on listings in **Affordable & Medium**(*min. 1-2 nights stay*) price segments
- Private Rooms- Focus more on in **Affordable & High** price segments
- Shared Rooms- **Shared rooms** are **not attracting much hosts** in both Bronx and Staten Island

# Appendix

## Data Methodology:

- Data was cleaned and null values were imputed
- The Data had **Large number of outliers** which were handled by appropriate methods
- A **detailed summary** of approach is documented in the **Methodology Document**
- **Recommendations** we derives using **Heatmaps** analysing all aspects

## Data Assumptions:

- **Reviews Per Month** was considered as a normalized quantitative measure for aspect of **popularity**.
- Instead of **Average**, **Median** was assumed as the **adjusted average** due to **presence of outliers**
- Listings which were **not available for booking**(*availability 365 = 0*) were **considered inactive**
- Majority of analysis was performed on **active listings**