

# Airbnb Case study – Story telling

**Submitted by:**

NAVEEN

NARGIS

MUKESH



# Agenda

- Objective
- Background
- Key Findings
- Appendix:
  - Data Attributes
  - Data Methodology
  - Data Assumptions

# Objective

- Improve our strategy to minimize the economic and commercial effects of Covid-19 on Airbnb, New York City.
- Understand client preferences and trends in user experience for Airbnb in New York City.
- Provide recommendations for fresh acquisitions and customer experience enhancement.

# Background

- Due to travel limitations imposed by the Covivirus-19 epidemic, Airbnb's income decreased significantly.
- 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
- So, analysis has been done on a dataset consisting of various AirBnb listings in New York.

# APPENDIX - DATA SOURCES

- The New York Airbnb Dataset includes information on various Airbnb listings, including their hosts, locations, pricing, and other characteristics. The dataset's columns are self-explanatory.
- We reviewed the dataset description on the right to gain a better understanding of what each column represents.

Column	Description
id	listing ID
name	name of the listing
host_id	host ID
host_name	name of the host
neighbourhood_group	location
neighbourhood	area
latitude	latitude coordinates
longitude	longitude coordinates
room_type	listing space type
price	
minimum_nights	amount of nights minimum
number_of_reviews	number of reviews
last_review	latest review
reviews_per_month	number of reviews per month
calculated_host_listings_count	amount of listing per host
availability_365	number of days when listing is available for booking

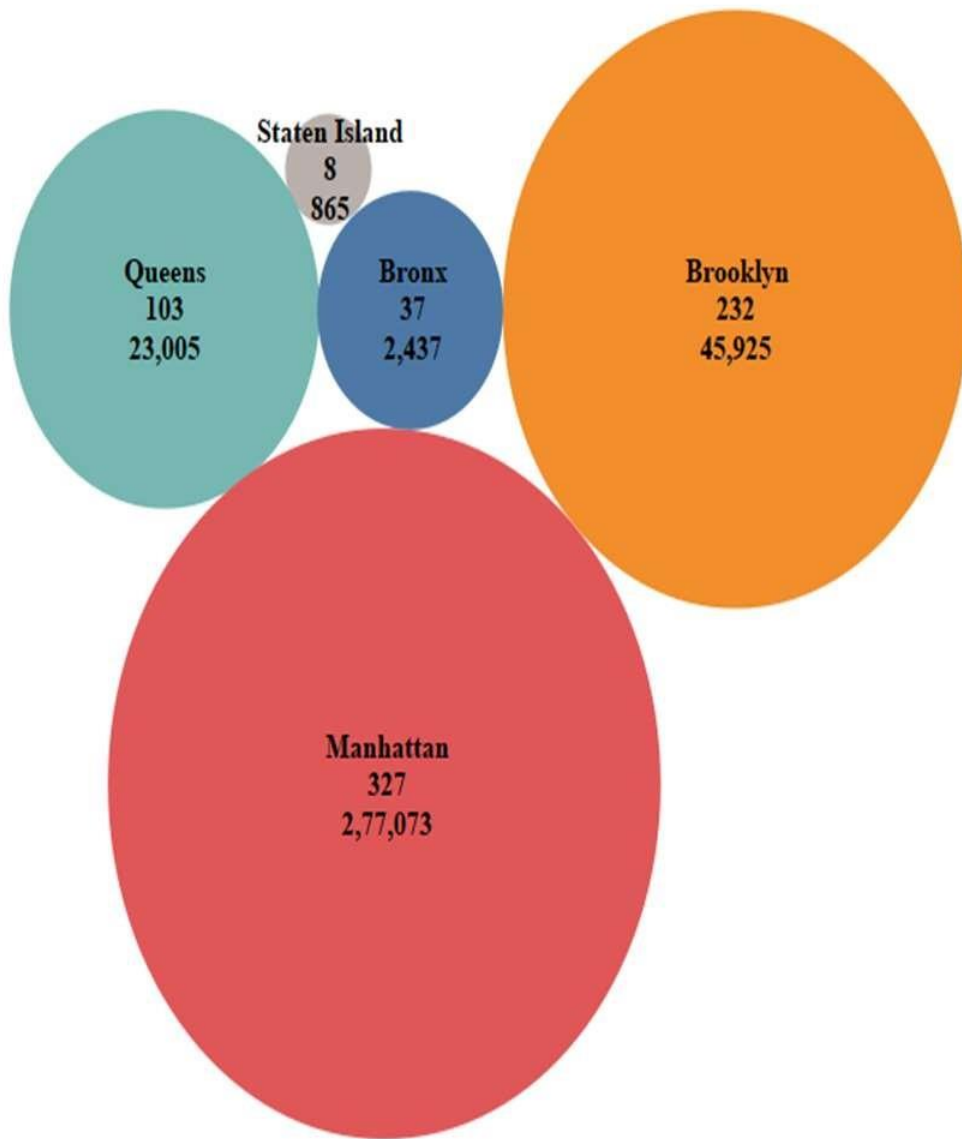
# APPENDIX – DATA METHODOLOGY

- A thorough analysis of the Airbnb Data was conducted. This process included
  - Cleaning the data set for missing values and outliers.
  - Using exploratory data analysis to identify customer preferences based on :
    - Locality/ Neighbourhood
    - Price
    - No. of Reviews
    - Minimum nights stay
    - Room Type
    - Host ID/Name

# Appendix - Data Assumptions

- In this case study, it is believed that Airbnb was able to reach the targeted level of revenue and profit prior to the implementation of COVID 19, and the data supports this assumption.
- The company is not now seeking to expand to additional cities around New York City.
- After global COVID-19 limitations are loosened, the business plans will be developed in light of the anticipated increase in travel.

# Host listings neighbourhood group

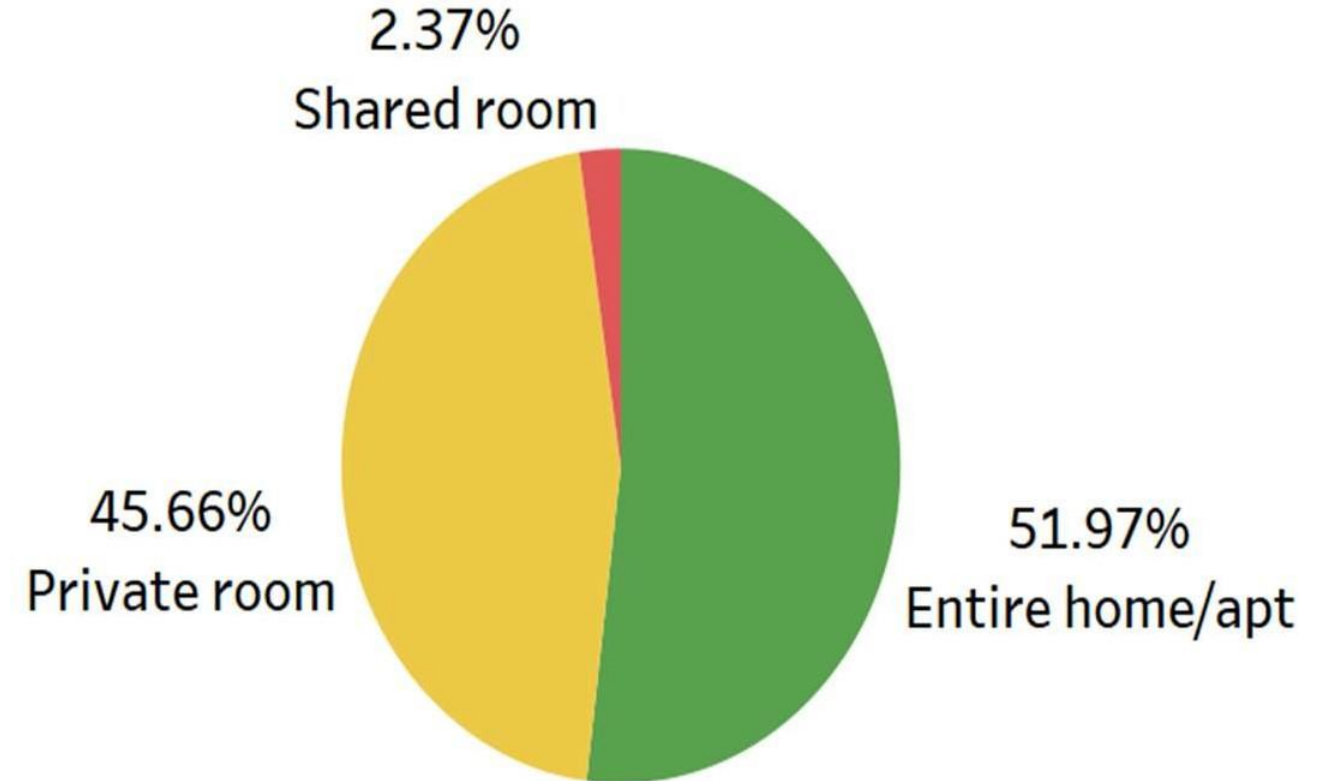


- Created a bubble chart between Host listings neighbourhood group just to see which neighbourhood group has the most host listings.
- Taken count of host listings. **Manhattan** has the highest count of host listings around 277073 and Staten Island has the least count of 865 host listings.

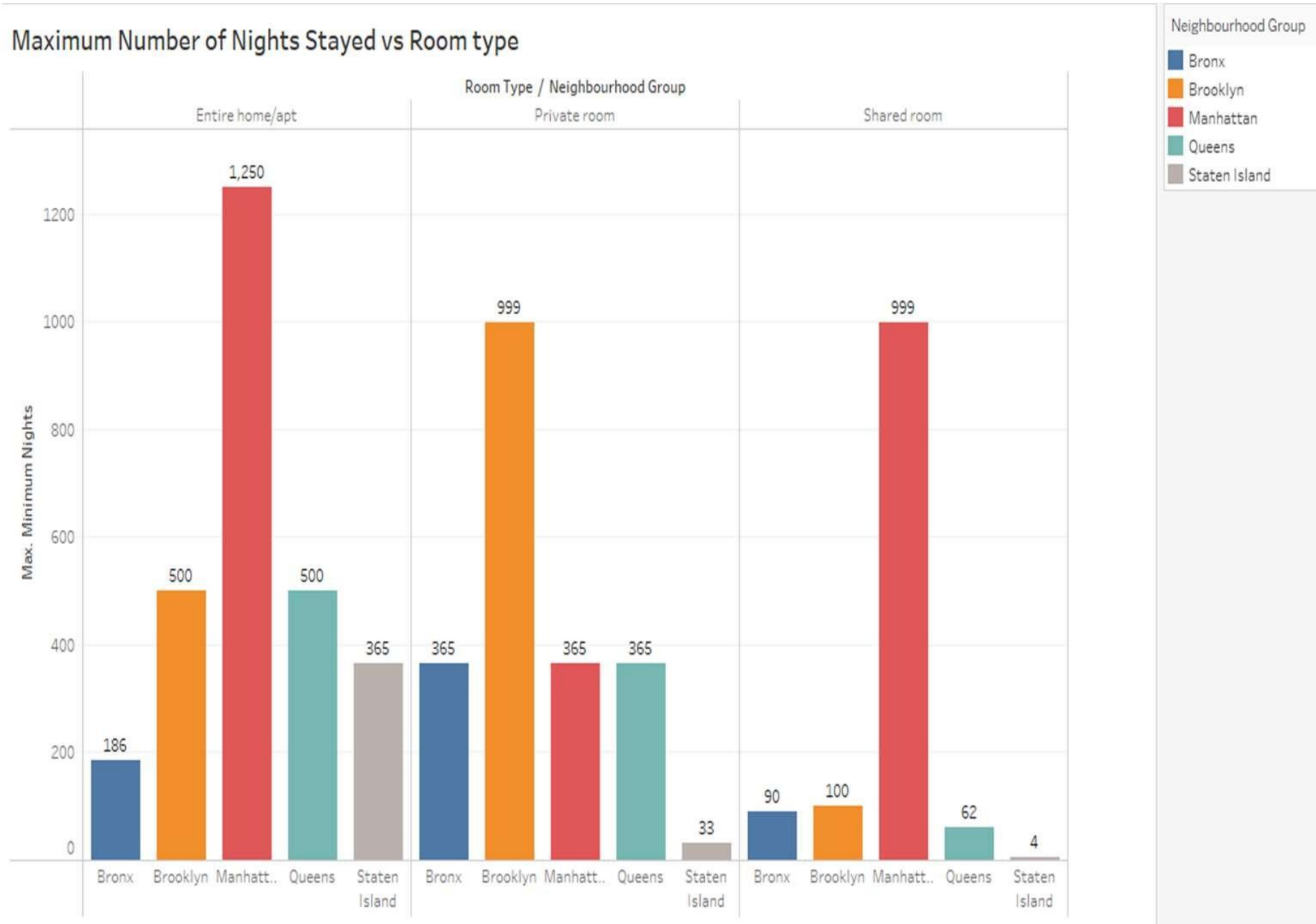


# Types of Properties

- Airbnb hosts providing rentals in New York City favour Entire home/apartment and Private room above shared rooms.
- The room types 'Entire home/apartment' and 'Private room' account 51.97% and 45.66% of the listed properties in New York City, respectively.
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- Only 2.37 % of all listed properties have shared rooms.

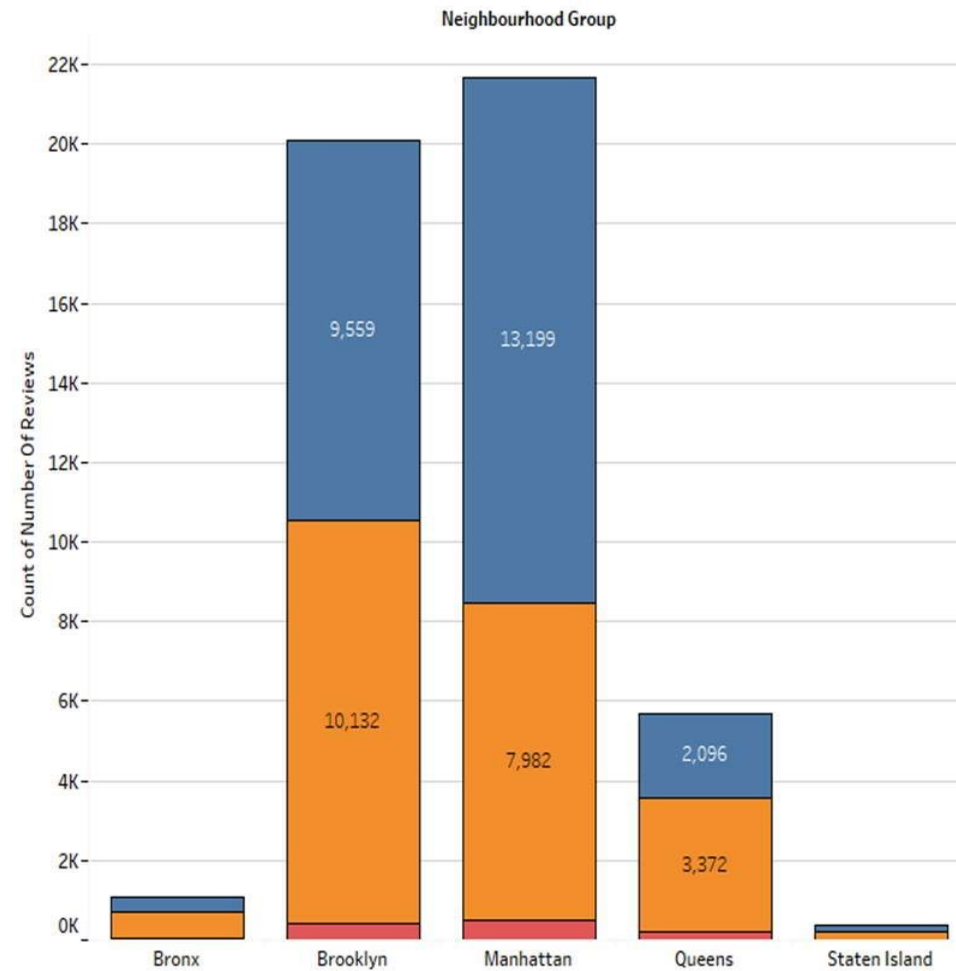


# Maximum number of nights stayed in different room types.



- The bar chart shows the maximum number of nights stayed for each room type.
- Here, we can conclude that most of the customers prefer Entire home/ apartment than Private room or Shared room in **Manhattan**.
- Most of the customers prefer Private room than Entire home/ apartment or Shared room in **Brooklyn**.

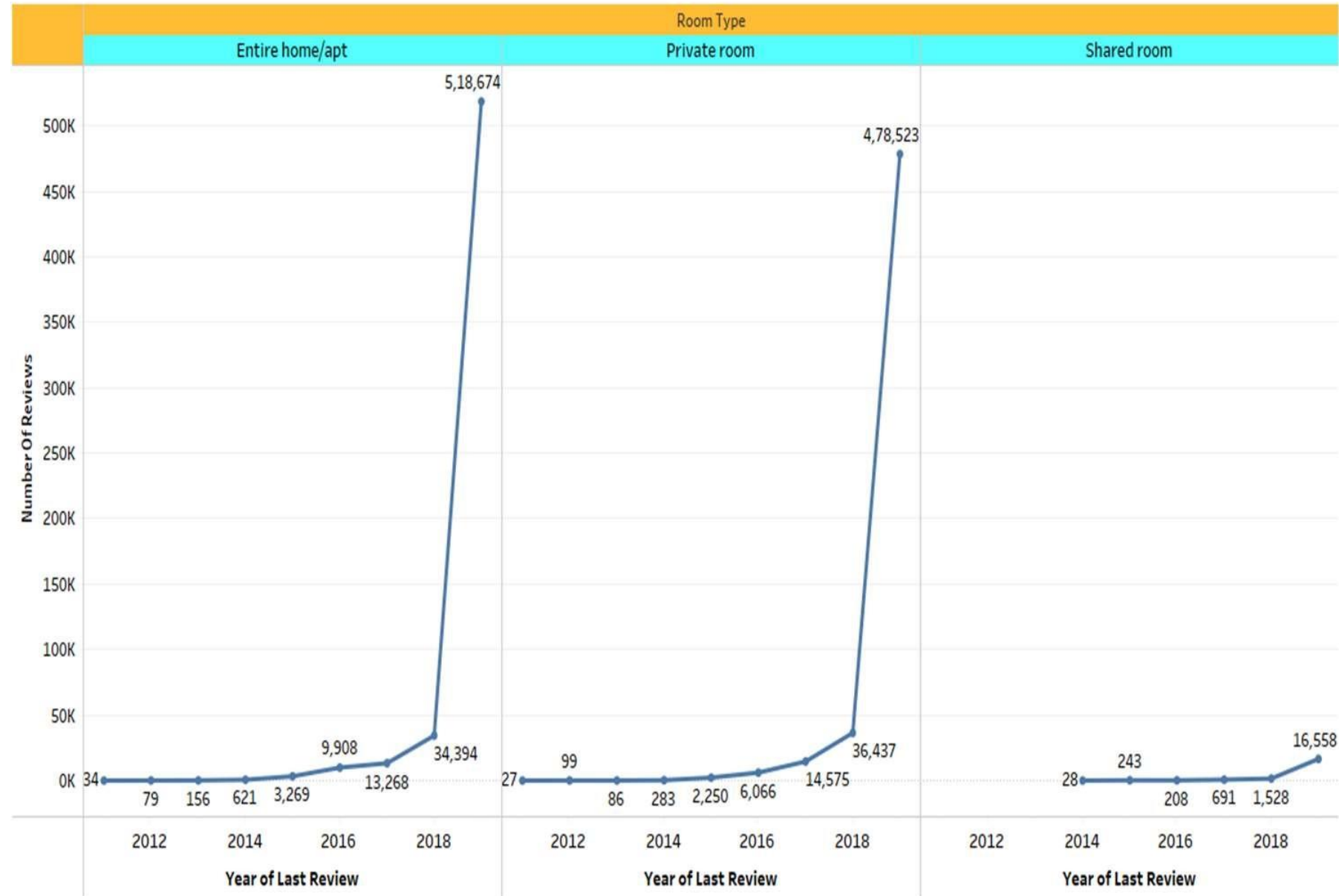
Number of Reviews with Respect to Room Type



- The customers will choose room type based on 2 important things.
  - Based on their requirement
  - Based on the reviews
- The bar chart shows Entire room/apartment has the highest review.
- As per previous slide most of the customers prefer Entire home/apartment than Private room or Shared room. The higher number of reviews/good reviews play a major role here.

# Number of Reviews vs Room type on different years (2012-2019)

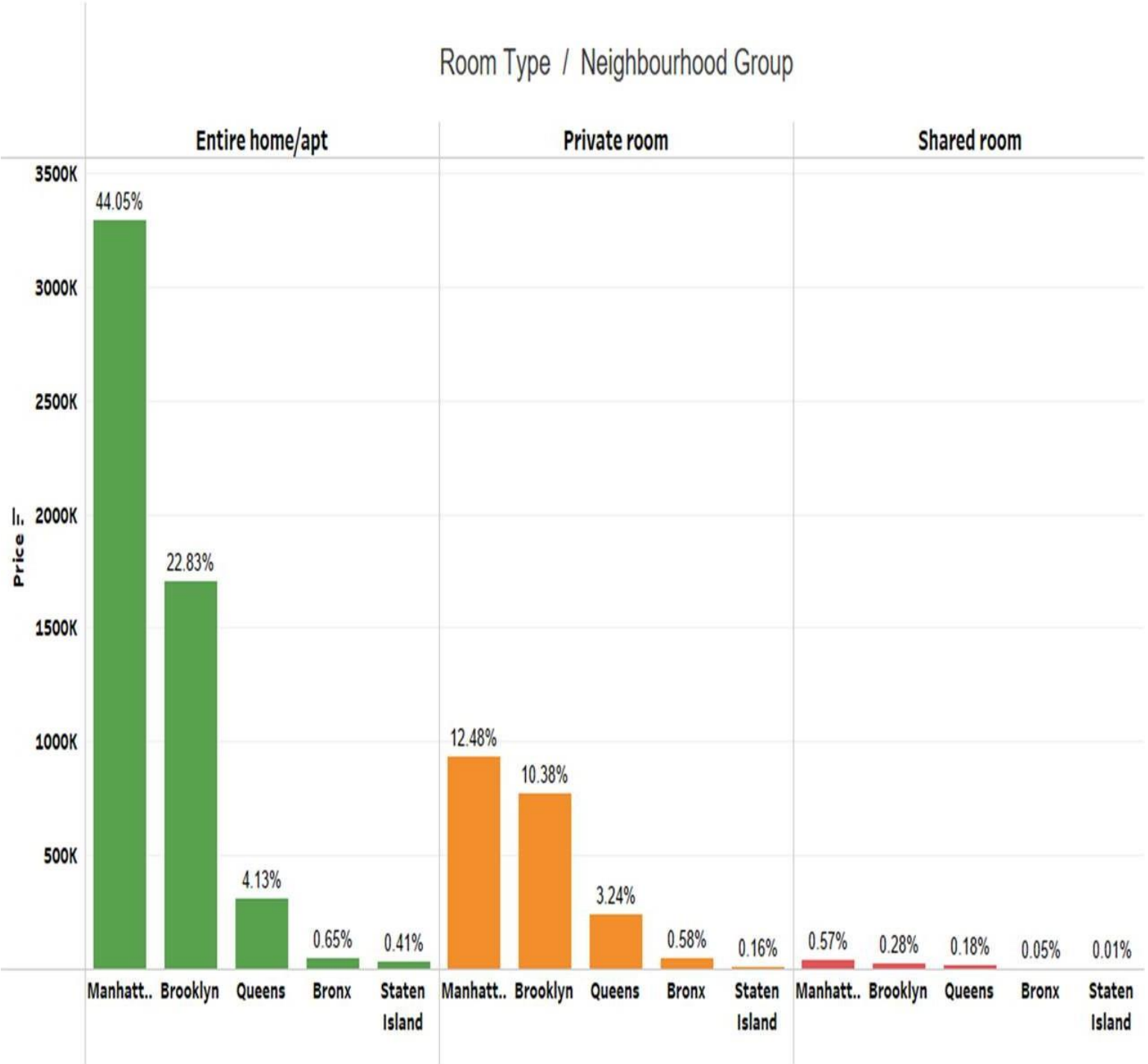
Number of Reviews vs Room type on different years



- The Line graph shows positive trend towards number of reviews on different room types from 2012-2019.
- However, Airbnb should concentrate on Shared room reviews to increase the number of customers.

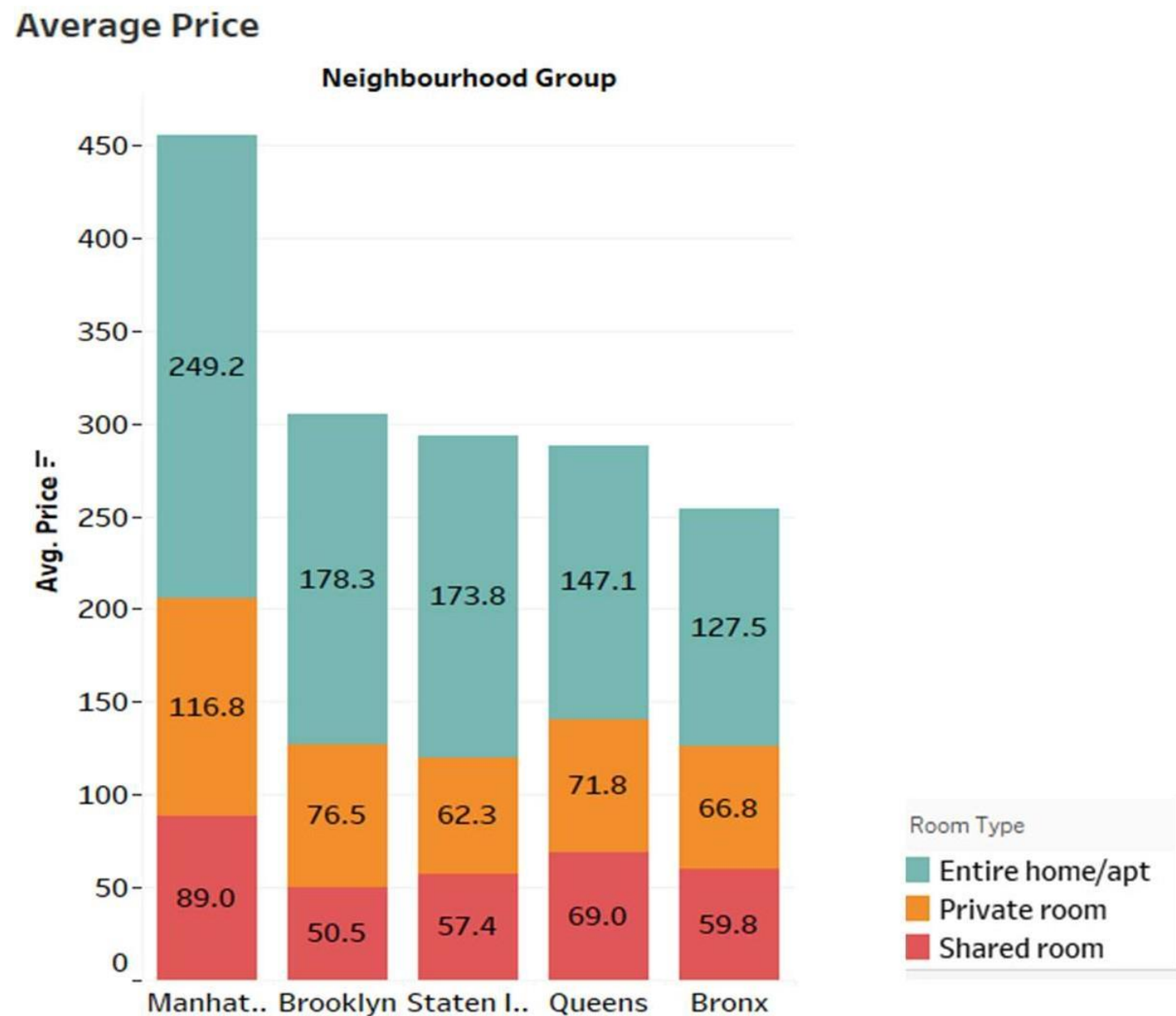
# Prices of Properties and Room Type in Neighbourhood Group

- Manhattan has the most expensive rental properties followed by Brooklyn, while Bronx and Staten Island have the least expensive.
- The most costly room type in both Manhattan and Brooklyn are entire homes/apartments, followed by private rooms.
- In Queens and Bronx, the price differential between complete homes/apartments and individual rooms is between 5 and 10%, compared to the other neighbourhood groupings.



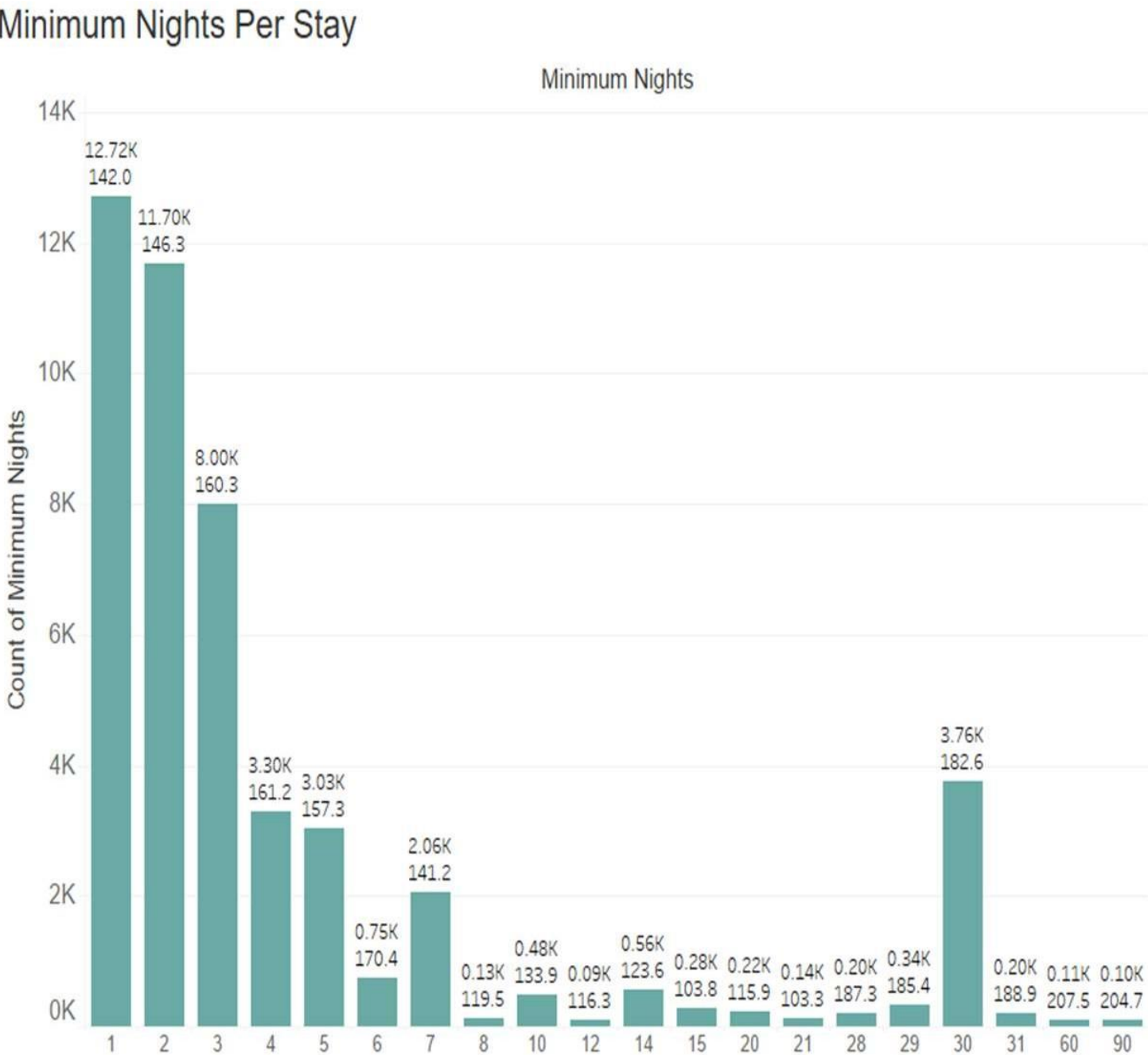
# Average Prices of Properties and Room Type in Neighbourhood Group

- Manhattan is the only neighbourhood category where the average price of the listed neighbourhoods is more than \$200.
- Brooklyn and Staten Island have average prices of \$124 and \$114, which are less and more affordable than Manhattan.
- Queens and Bronx have average prices of \$100 and \$88 respectively, making them the most inexpensive areas in New York City.





# Customer Preferences of Minimum Nights Per Stay



- 12.7k customers prefers to stay for a day on their visit closely followed by 11.6k customers who stay for 2 nights.
- Customers also prefer to stay for 3-7 nights.

# Key Insights & Recommendations

- Airbnb hosts providing rentals in New York City favour Entire home/apartment and Private room above shared rooms.
- Manhattan has the most expensive rental properties followed by Brooklyn , while Bronx and Staten Island have the least expensive.
- Customer preferences of night stays rises on 14 nights, 30 nights.



Thank you