Impact of customer preference on rentals

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Objective

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Objective

❑ Acquisition of Best properties in New York Optimal Price Negotiations and negotiations of services recommend changes to enhance user experience.

❑ To do analysis to understand customer reviews impact on overall demand and in turn the revenue of company.
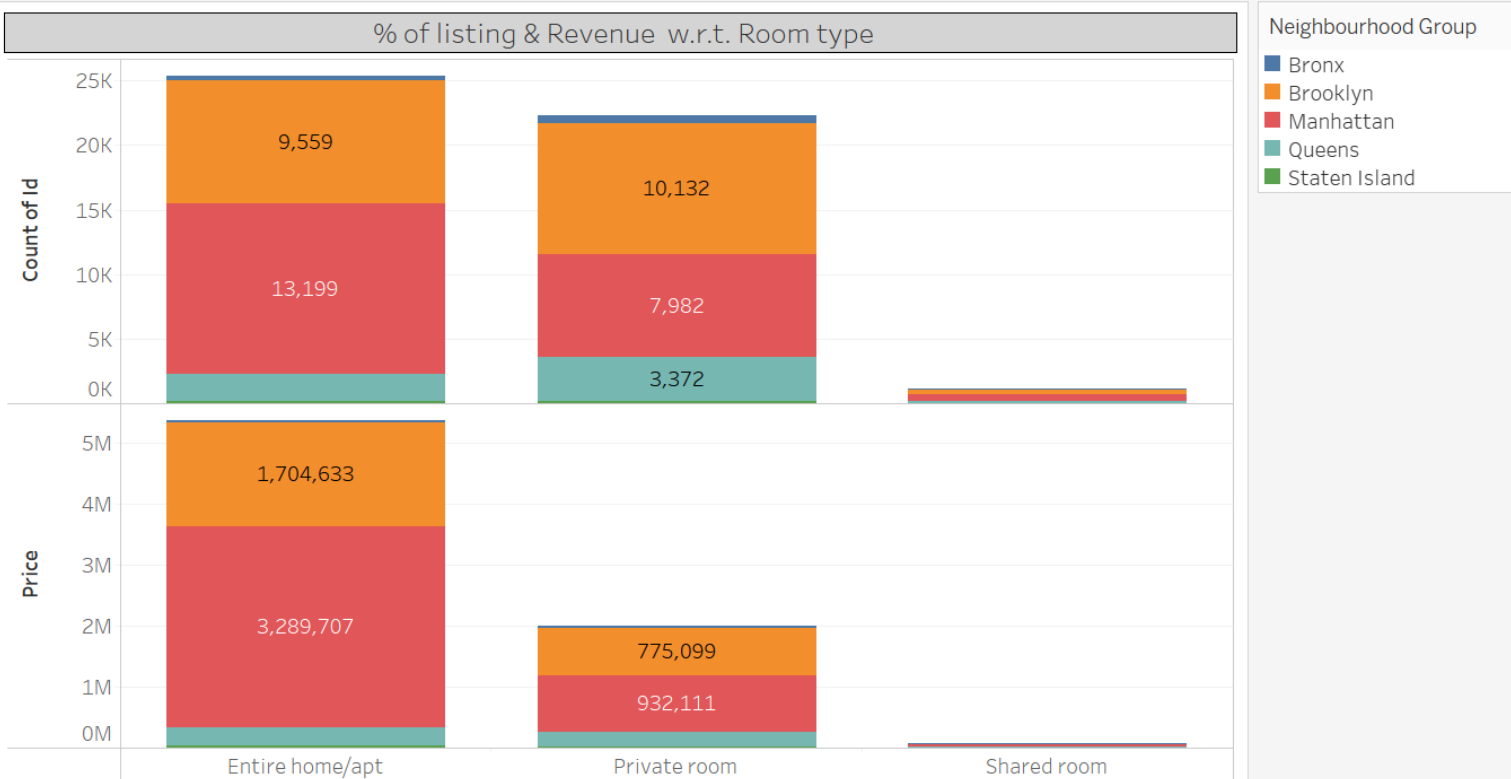
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Business Model And Background

❑ In spite of boasting a network of 5.6 million properties across 220 countries, Airbnb doesn't own any of the properties listed on its platform.

❑ Airbnb's business model entails receiving a commission on the bookings made through its marketplace platform.

❑ 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.
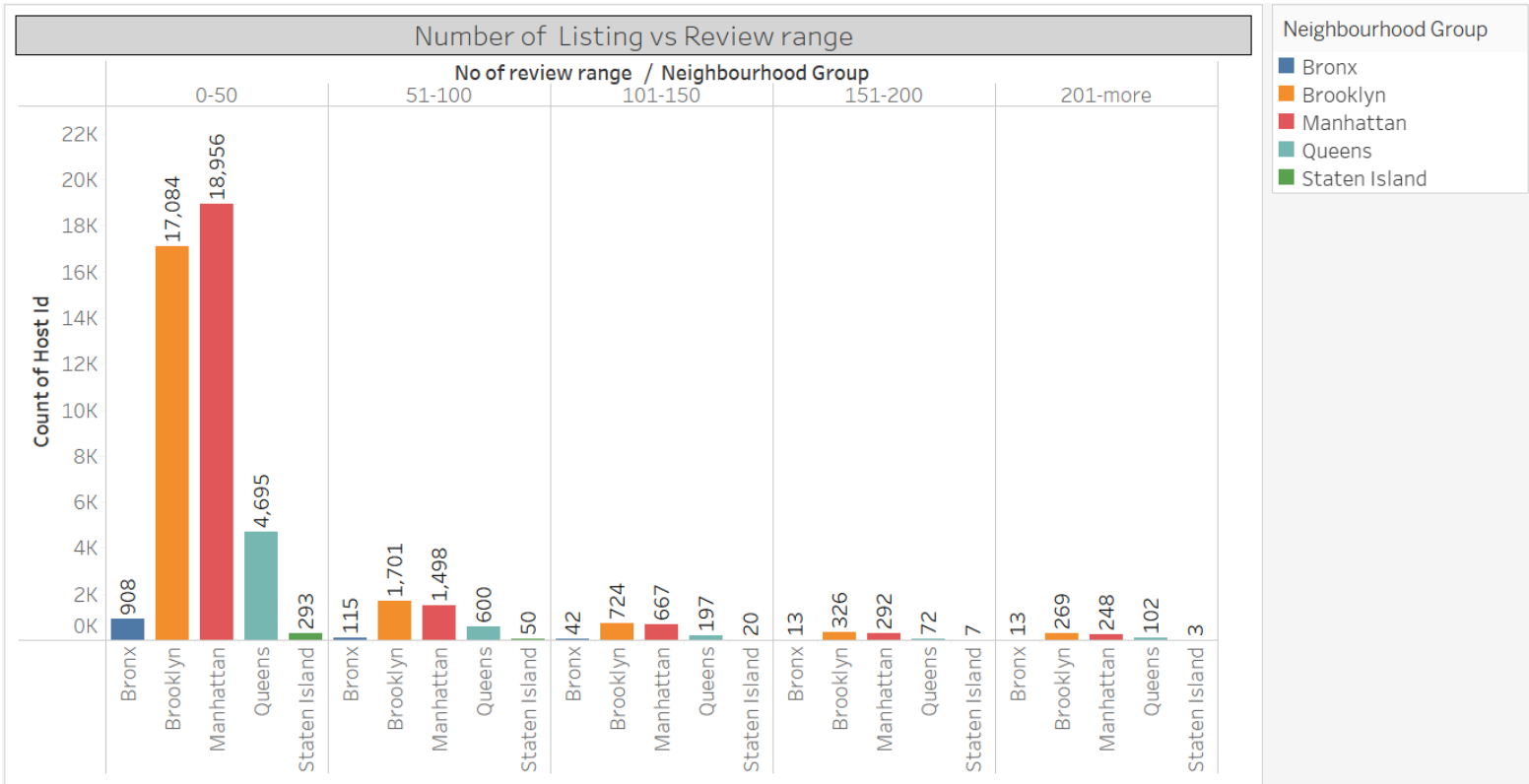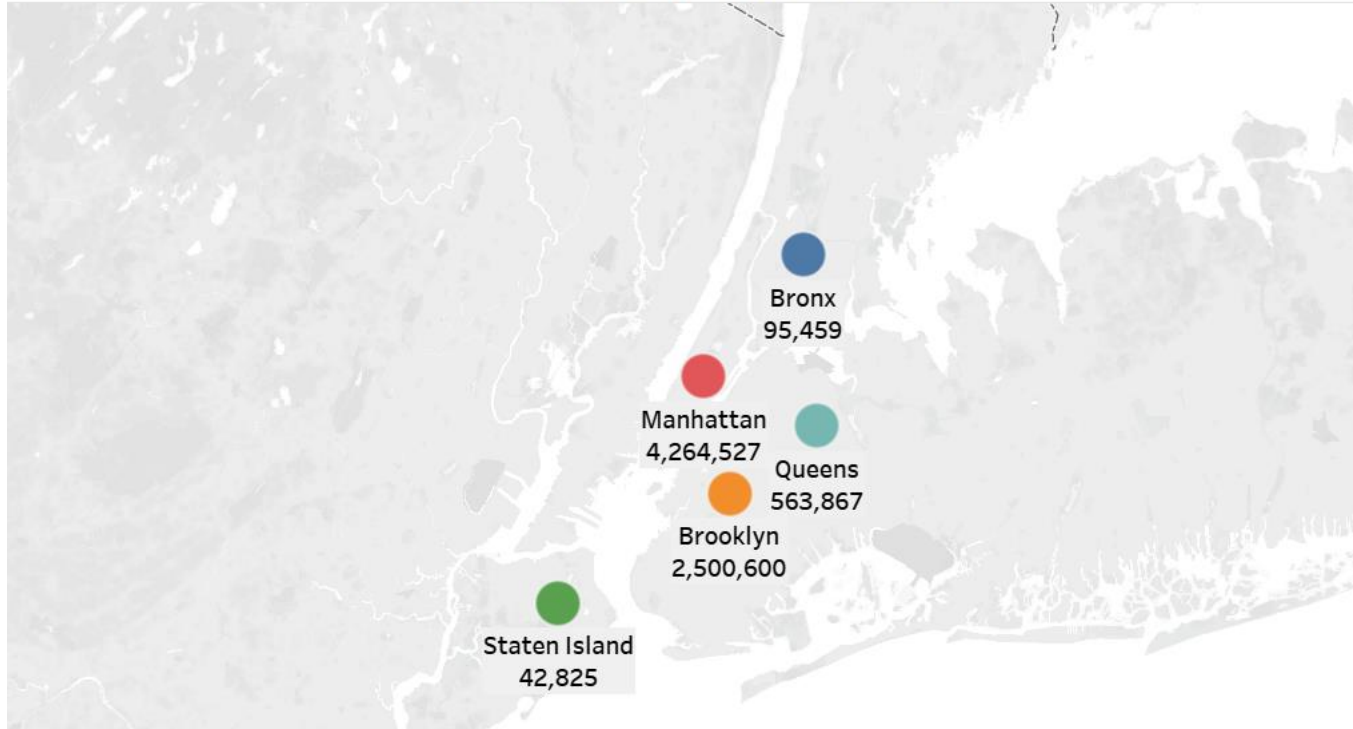
Analysis

❑ The most preferred pricing range is 0-50 USD by customers.

❑ The highest demand for that in neighborhood groups named **Manhattan** and **Brooklyn** (18.9K and 17K respectively) followed by Queens (4.6K).

❑ Staten Island have the comparatively low demand.

% of listing & Revenue w.r.t. Room type

Neighbourhood Group
- Bronx
- Brooklyn
- Manhattan
- Queens
- Staten Island

Count of Id values: 9,559 · 13,199 · 10,132 · 7,982 · 3,372

Price values: 1,704,633 · 3,289,707 · 775,099 · 932,111

Room types: Entire home/apt · Private room · Shared room

Analysis

❑ There are three type of room types **Entire home/apt , Private room, Shared Room**.

❑ Host listing count & revenue is maximum for Entire home /Apt and that too for Manhatten neighborhood group.

❑ However in Brooklyn and Queen the listing for private room is higher.

❑ **Brooklyn** leading with highest revenue in private rooms.

❑ Listing and revenue of shared rooms is very negligible in all neighborhood group
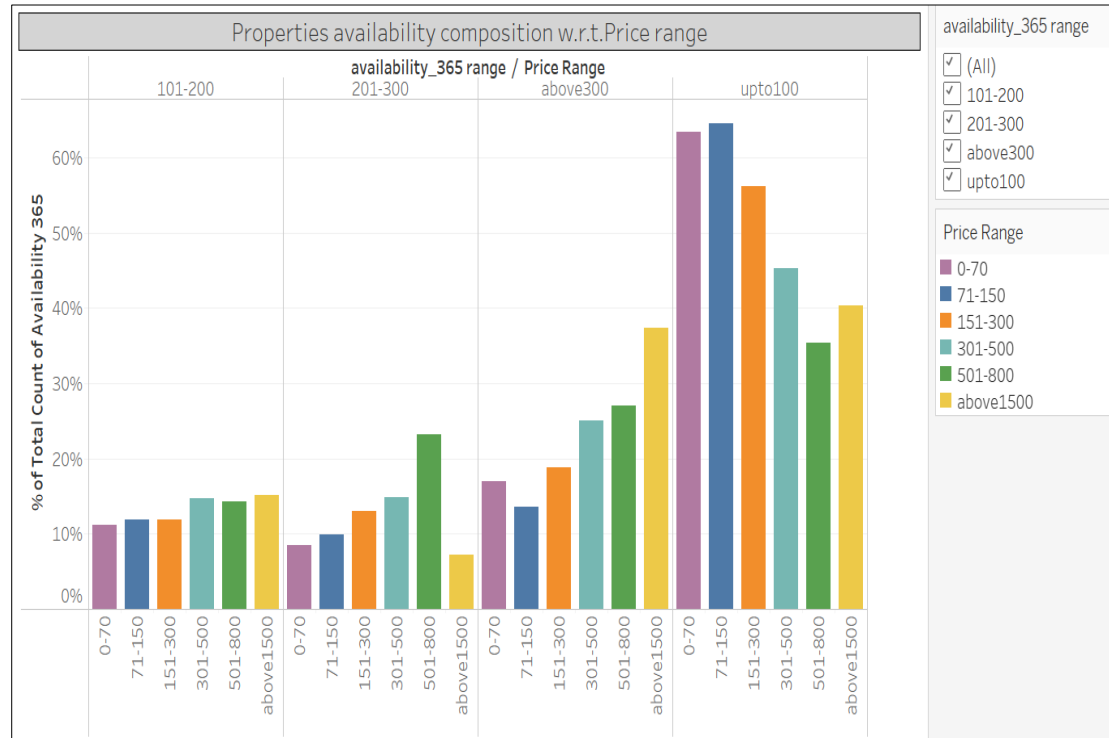
Price Variation w.r.t Location

Bronx
95,459

Manhattan
4,264,527

Queens
563,867

Brooklyn
2,500,600

Staten Island
42,825

Analysis

❑ From the graph we can see that Price of accommodation in **Manhattan** is the highest followed by **Brooklyn.**

❑ Because of high population and also scenic views is enough to attract anyone.

❑ The Staten Island shows very few listings because of less population and density.
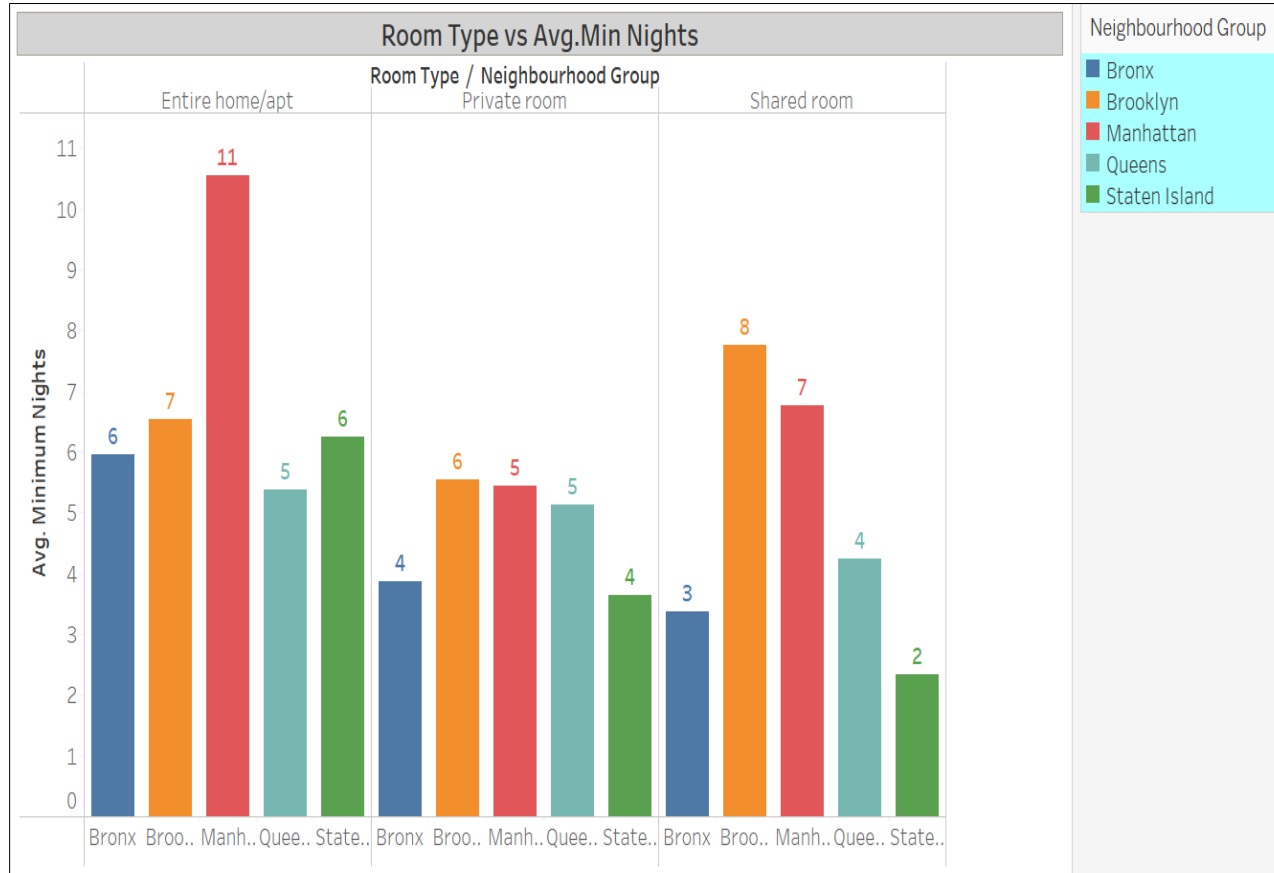
Analysis

❑ We can reduce number of min nights where avg price is high.

❑ Shared room also have very high min nights and may be that's one of the reason their demand is low.

❑ **Manhattan** have higher number bookings compared to the others.

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Properties availability composition w.r.t. Price range

Counts of the top 25 used words for listing names

- ❑ Properties in availability range 201-300 are majorly from price range 501-800.
- ❑ So we can reduce the price to increase consumption of those rooms.
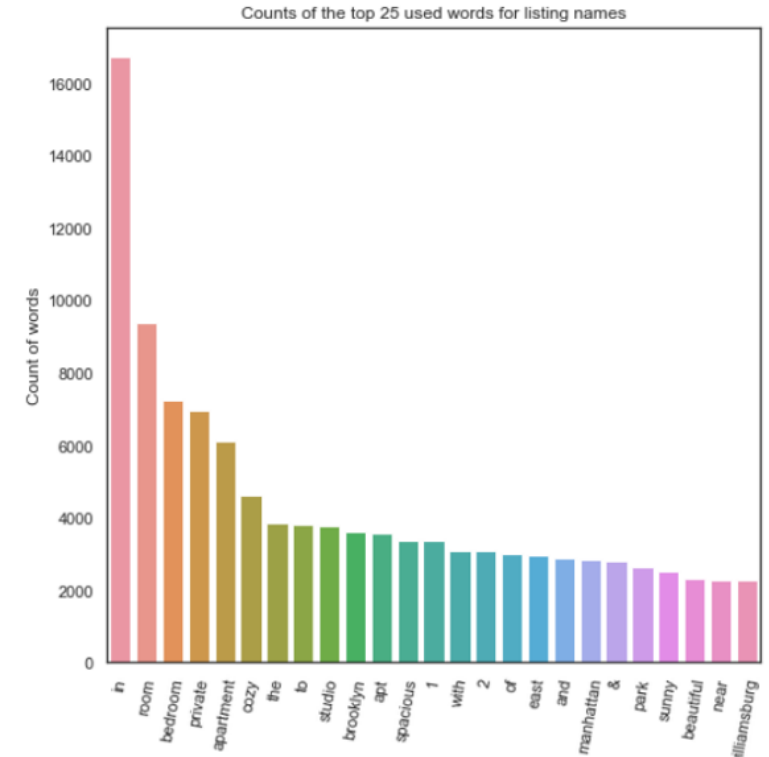
- ❑ Hosts are using very simple terms like 'room', 'bedroom', 'private', 'apartment', 'studio to describe their property.
- ❑ This technique useful while dealing with multilingual customer as it will describe space in a concise and understood form .

Recommendation

❑ Acquire more properties in Manhattan ,Brooklyn and Staten island. Focus more on acquiring properties whose rent can range up to 70 USD. If we reduce the number of Minimum nights stay in Shared rooms. We saw there were very less bookings for shared rooms. We may want to understand why. May be there are safety concerns like theft or issues like as invasion of privacy. Having word with property owners will help.

❑ Provide discounted commission rates to property owners on keeping the minimum night stay booking window to optimum and property functional for a maximum number of days in a year. Encourage and educate host to use simple words to describe property to capture Multilingual market too.

❑ Airbnb is one of the pioneers to epitomize the concept of the sharing economy. To take care of customers we need to take care of hosts too. We need to do One-to-one interaction with some property owners in Staten Island, Queens, and the Bronx to identify their challenges for being fully functional for a maximum number of days in a year. Create some sort of interaction between the Top 5 hosts to share their experience with the rest of the community for better improvement and value-generating ideas. If we roll out Workcation services in all our properties, we can see surge in the shared room bookings.

| 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 Sources

❑ The Data dictionary consists
  ▪ Host details such as Id, name, host name and host id.
  ▪ Property Listings information such as latitude, longitude, price, room type.
❑ We were provided with New York Airbnb Dataset by UpGrad team.
❑ The survey conducted in 2019.

Appendix – Data Methodology

❑ For analysis we used Jupyter notebook to read the data , data cleaning and feature engineering.

❑ However, Tableau was used to do the visualizations.

❑ We didn't deal with extreme values in the data frame as we observed that if we remove them , insights from data were getting lost.

❑ We analyzed the missing values in reviews_per_month carrying no values on purpose, it may be assumed that of people who were not satisfied with property didn't give any review so we consider them as 0.
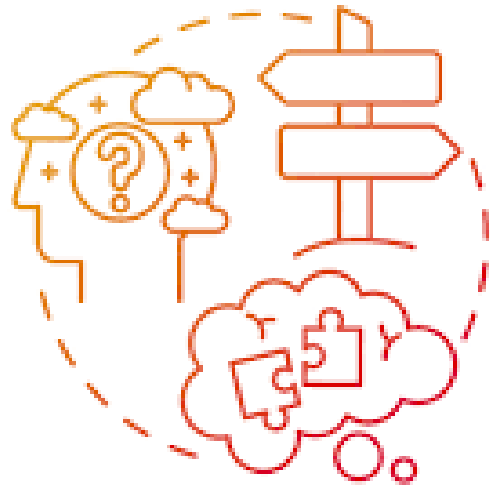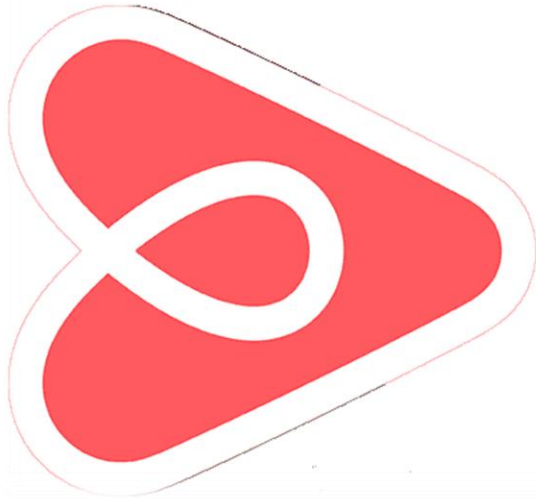
Appendix – Assumptions

❑ User reviews per listing are assumed to be positive reviews and considered as popularity measure to gain information on customer preferences.

❑ Number of reviews are assumed to be base measure to find customer preferences.

❑ Airbnb Guests have a plethora of options to choose from; on one single platform. For this case study we are considering only 3 types of room types.