

# AIRBNB STORYTELLING CASE STUDY- PPT 2

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# OBJECTIVE

- Analyze Airbnb's **listing trends, pricing, and customer preferences** in New York.
- Identify **opportunities for property acquisition and strategic pricing**.
- Optimize **user experience by improving listing visibility and customer engagement**.



# BUSINESS CONTEXT

- **Revenue Decline:** Airbnb suffered losses due to **COVID-19 travel restrictions**.
- **Market Recovery:** With travel resuming, Airbnb must **adapt to changing demands**.
- **Objective:** Leverage **data-driven insights** to improve **acquisitions & user experience**.



# KEY MARKET INSIGHTS

- **Manhattan & Brooklyn** dominate Airbnb listings.
- **Entire homes & private rooms** are preferred by users.
- **Price sensitivity:** Customers prefer properties in the **\$60-\$200** range.
- **Long-term rentals:** Noticeable demand for **30-day stays**, indicating **corporate bookings**.



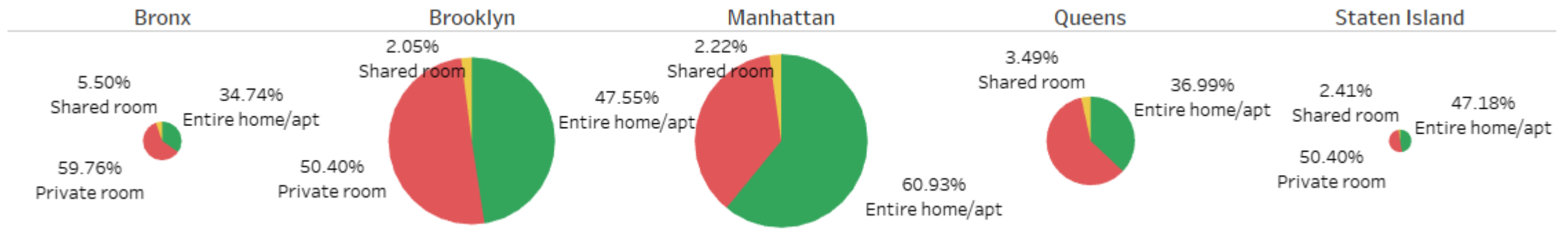
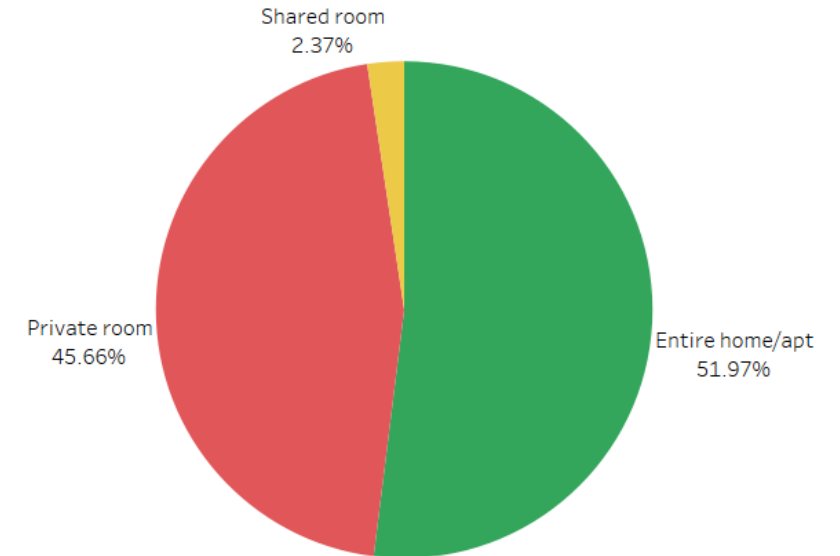
# Acquisition Strategy – Ideal Property Selection

## •Top-performing neighborhoods for acquisitions:

- **Bedford-Stuyvesant, Williamsburg (Brooklyn)** – High customer engagement.
- **Harlem, Hell's Kitchen (Manhattan)** – Strong demand, high review counts.

## •Property type recommendations:

- Focus on **entire homes & private rooms**.
- **Avoid shared rooms** due to low demand.



# Pricing & Revenue Optimization

- **Manhattan:** Most expensive listings (~\$250 for entire homes).

- **Brooklyn:** Offers affordability, shared rooms average \$50.5.

- **Strategic Pricing Recommendations:**

- **Dynamic pricing** based on seasonality & demand.
- **Discounted long-term stays** to attract business travelers.
- **Incentivize hosts** to list properties in high-demand areas.

		Neighbourhood Group				
Room Type		Bronx	Brooklyn	Manhattan	Queens	Staten Island
Entire home/apt		127.5	178.3	249.2	147.1	173.8
Private room		66.8	76.5	116.8	71.8	62.3
Shared room		59.8	50.5	89.0	69.0	57.4

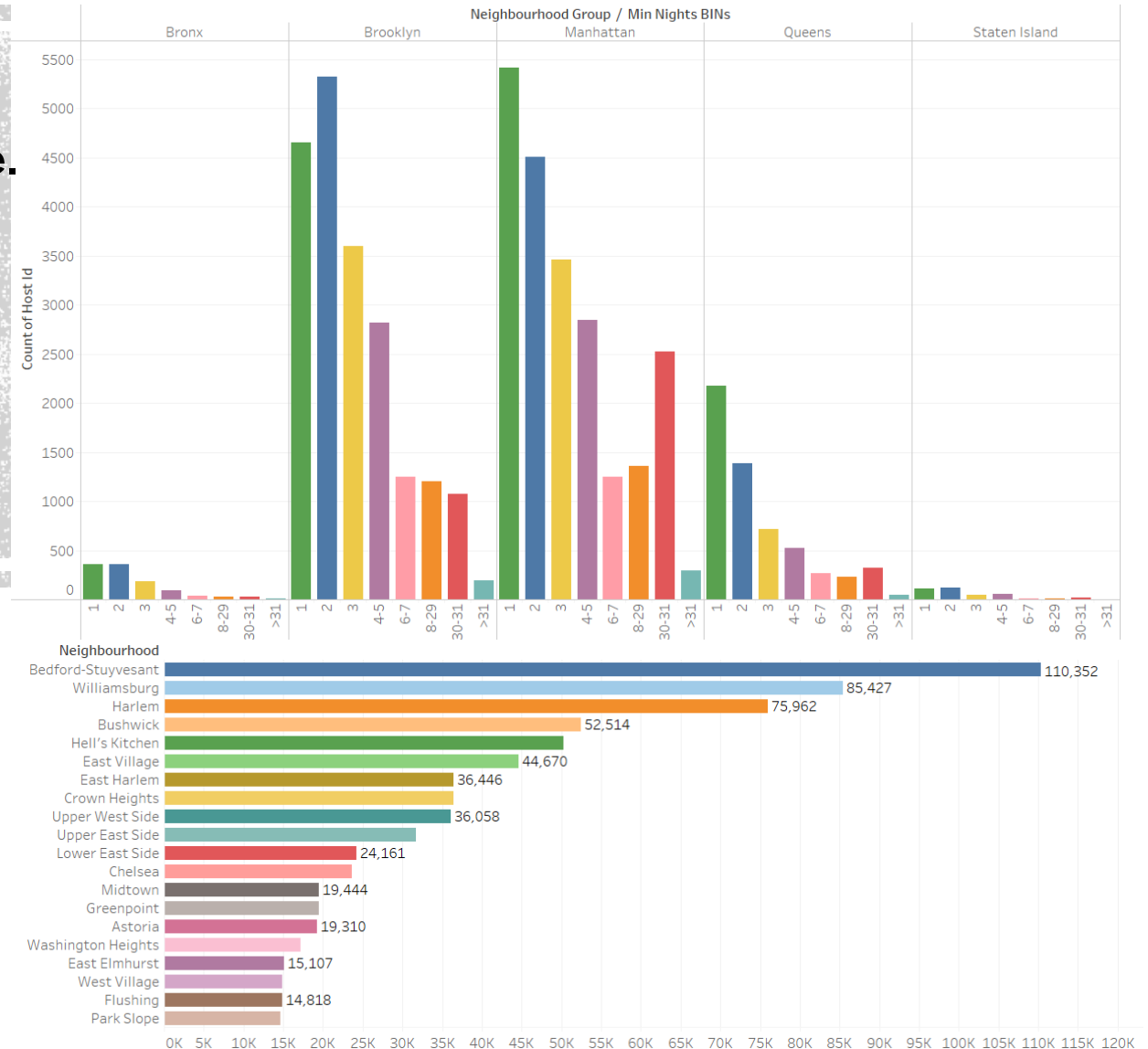
# Customer Behavior Insights

## •Booking Trends:

- **Short stays (1-5 nights) dominate.**
- **30-day rentals growing, indicating corporate travelers & relocations.**

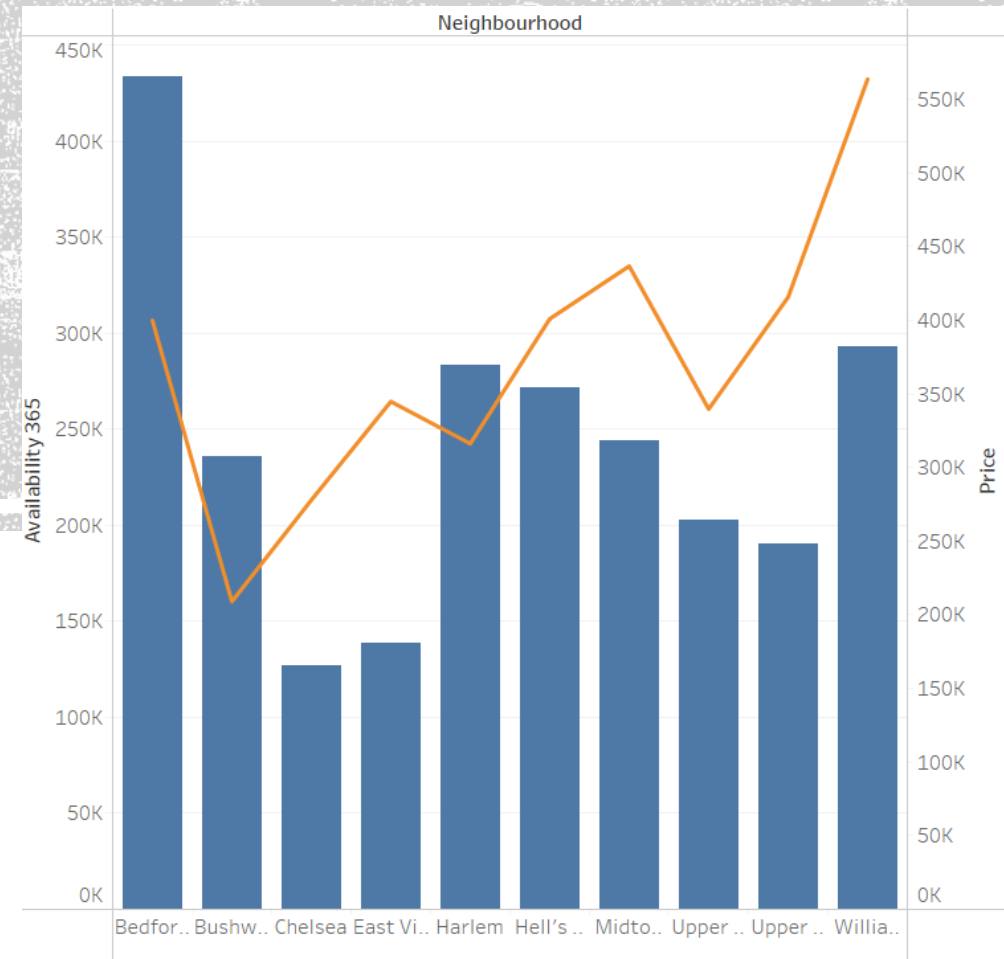
## •Neighborhood Preferences:

- **Bedford-Stuyvesant** leads in reviews (~110,352), followed by **Williamsburg**.
- **Harlem & Hell's Kitchen** are top locations in Manhattan.



# Neighbourhood Prices vs Availability

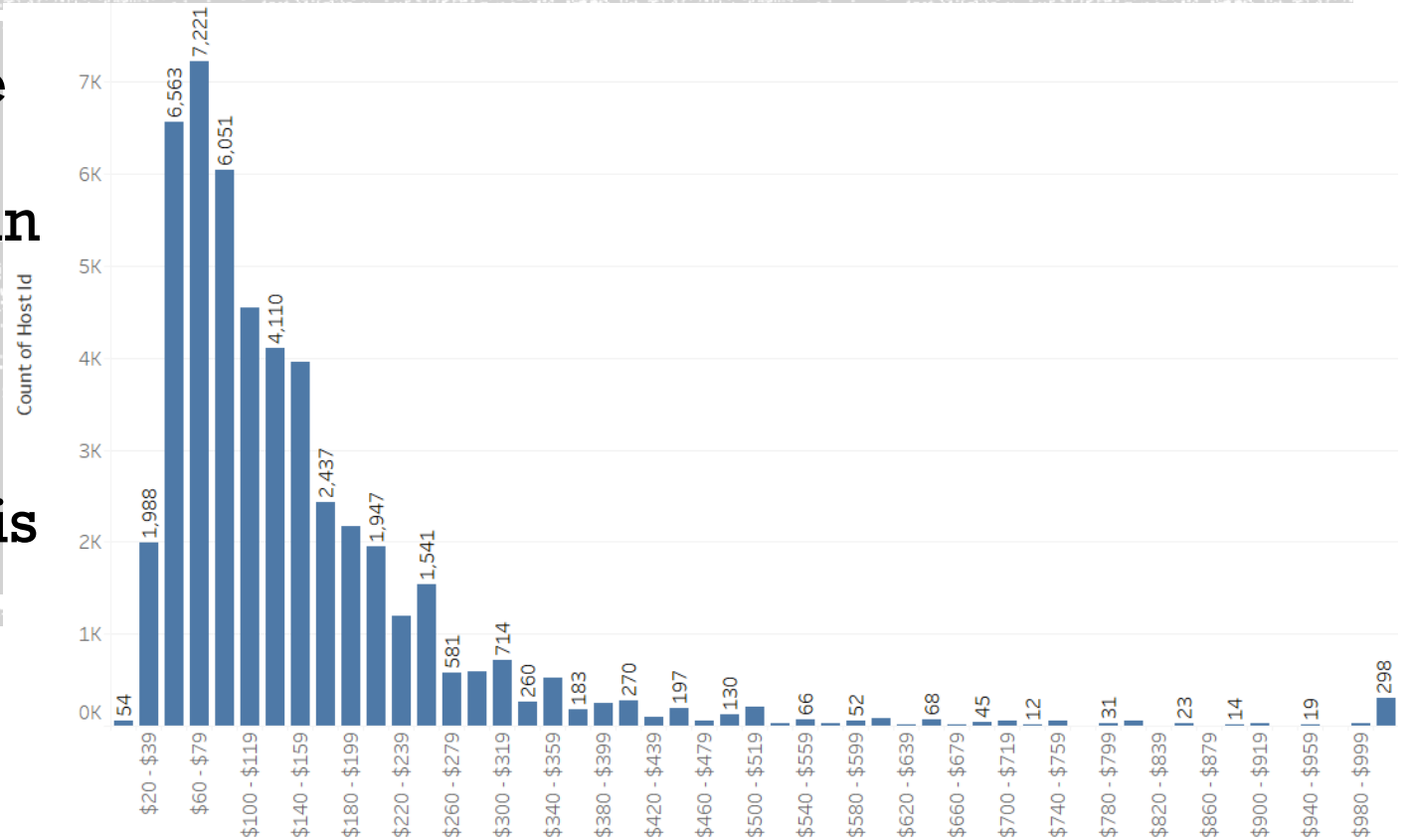
- Bedford has the highest availability and relatively lower prices, making it a favorable option for customers.
- Harlem follows a similar trend after Bedford.
- Chelsea has limited availability but is comparatively expensive.
- In contrast, Williamsburg has high prices with moderate availability.





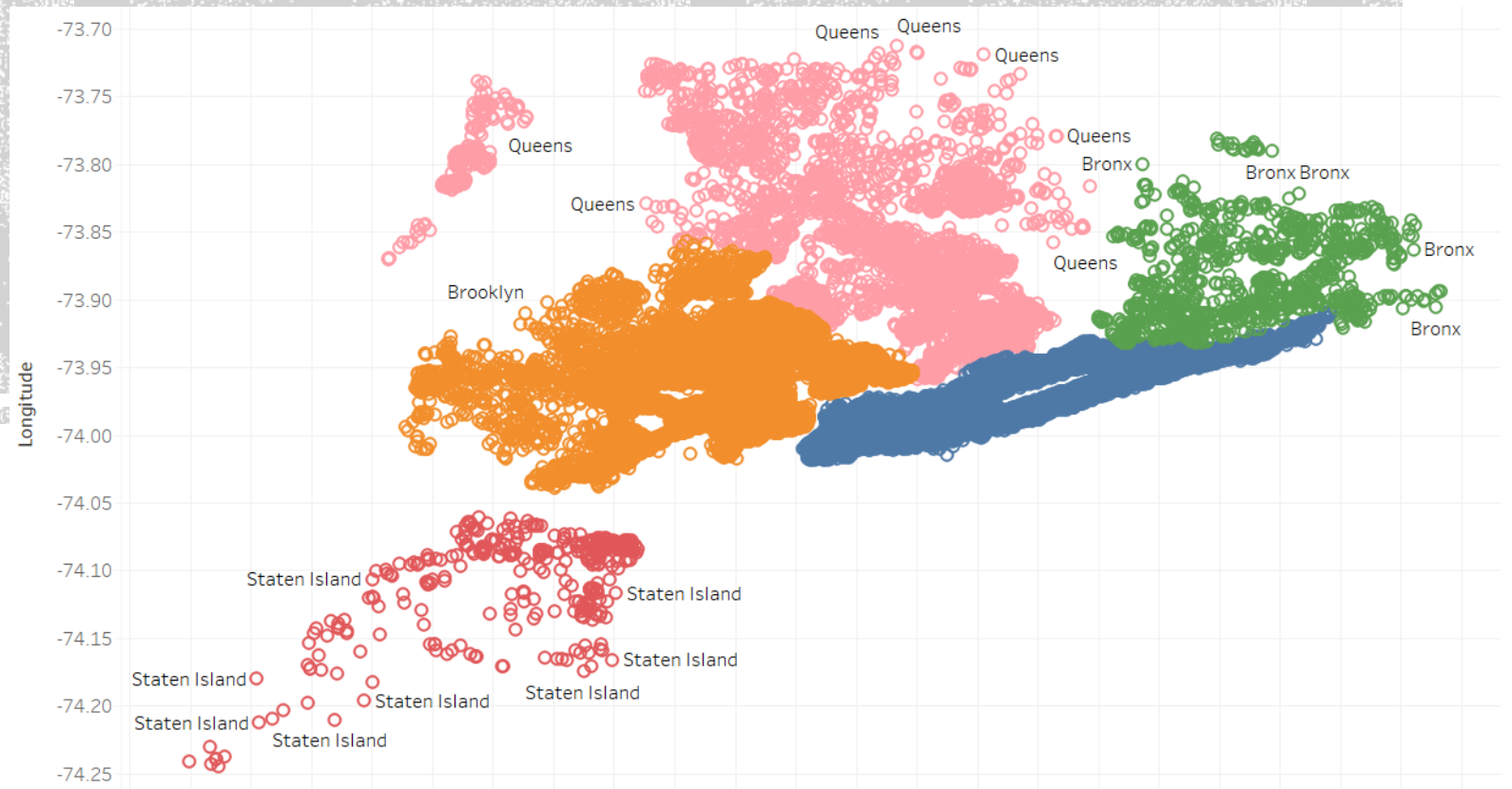
# Preferred Price Ranges

- Pricing preferences were analyzed based on the volume of bookings within different price ranges.
- Graph indicates that the most preferred price range among customers is between \$60 and \$200.



# Room type Vs Neighbourhood group

- Airbnb has a strong presence in Manhattan, Brooklyn, and Queens.
- Manhattan and Brooklyn have the highest number of listings, driven by their high population density and status as NYC's financial and tourism hubs.
- Staten Island has the fewest listings due to its lower population density and limited tourist attractions.



# ACTIONABLE RECOMMENDATIONS

- **For Acquisitions & Operations**

- Prioritize property acquisitions in **Brooklyn & Manhattan**.
- Encourage hosts to list **entire homes & private rooms** over shared spaces.
- Expand **long-term rental options** for corporate clients.

- **For User Experience & Customer Engagement**

- Improve search algorithms to highlight **high-demand listings**.
- Offer **personalized recommendations** based on user behavior.
- Implement **reviews-based ranking improvements** to enhance trust.



# APPENDIX- DATA SOURCES

- Data File- [AB NYC 2019.csv](#)
- Prepared Data File- [airbnb final.csv](#)

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

- Data methodology File- [Airbnb Case Study Methodology.pdf](#)
  - **Step 1: Data Cleaning and Preparation - Preprocessing in Jupyter Notebook**
  - **Step 2: Data Analysis & Visualization Using Tableau**
  - **Step 3: Additional Visualizations**
  - **Step 4: Deriving Conclusions from insights**



# APPENDIX- DATA ASSUMPTIONS

## Categorical Variables:

- room\_type
- neighbourhood\_group
- neighbourhood

## Continuous Variables(Numerical):

- Price
- minimum\_nights
- number\_of\_reviews
- reviews\_per\_month
- calculated\_host\_listings\_count
- availability\_365
- Continuous Variables could be binned in to groups too

## Location Variables:

- latitude
- longitude

## Time Variable:

- last\_review

