**Travelezy Case Study**

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# Objective

Use drill up/down, pivot, slice, dice techniques to:

* Explore, find insights, and facilitate the decision-making process
* Explore and discover patterns, recognize, and analyze trends
* Discoveries and corresponding analysis, identifying the problem(s) or issue(s) you found.
* Use any root-cause analysis techniques to solve the problem and/or improve performance

# Data cleaning

Before creating the operational dashboards, upon looking carefully at the chosen dataset using Tableau Prep Builder, we found many significant issues with the raw data including but not limited to:

* Replacement and removal of the null values in fields including beds, zip codes, neighbourhood, ratings, etc.
* Correction of the correct format of the zip codes

# Insights and patterns

Average price in Manhattan is the highest and Bronx has the lowest mean price. Some other property type has the highest prices and Villas are on second, on other side Lighthouses are cheapest. Surprisingly overall rent prices of apartments, cabins, lofts, and condominiums are higher than on houses and castles.

The rent of the entire home/apt is highest, then Private room and shared rooms are cheapest which is to be expected but rent price of Entire home/apt are significantly higher more than two times.

Rent prices in Manhattan are highest for most of the property types, but Villa, Treehouse, Other, Hut.

Also, there are most of the property types located in Manhattan, Brooklyn, and Queens, although the Bronx and Staten Island offer about a third of property types. As we know, Manhattan, Brooklyn, and Queens have most of the property types to offer, Queens and Brooklyn property average prices are significantly less than in Manhattan, Queens and Brooklyn's bars seem higher mostly because of Villas in Brooklyn and because of other property types in Queens.

Overall Manhattan rent prices are tremendously higher than in other Neighbourhoods. Although Brooklyn and Queens offer Villas, Treehouses, Other property types, and Huts for a much higher price. Bronx and Staten Island property prices are lower, and these areas offer fewer types of properties.

When comparing Customer Ratings vs. Neighbourhoods, it is seen Brooklyn to have the highest average customer rating with a score of 92.355, and the lowest average rating belonging to Staten Island with an average customer rating of 90.842.

# Visualizations

### Daniyar Kurmanbayev

Chart

Description automatically generated

### Purvi Jain

Chart, treemap chart

Description automatically generated

### Vrinda Parameswaran

Chart, bar chart, waterfall chart

Description automatically generated

Chart, bar chart, waterfall chart

Description automatically generated

### Tanvir Singh Ahuja

Chart

Description automatically generated

### Shanka Attanayake

# Problems And Issus Found

1. Bed type with Null Values so grouped it with Bed Type-0 using Tableau prep
2. Name has lot of punctuation and empty spaces, so remove those extra spaces
3. The dataset does not include viable regions that is detectable in Tableau which makes it difficult to create any analysis on mapping.

# Root Cause Analysis

1. Why is Manhattan the largest profit region?

Most customers rent Manhattan.

* + Why do customers rent in Manhattan?

Manhattan is the center of New York?

* + - Why does customers prefer Manhattan over other Regions?

Manhattan can meet the customer demands.

1. Why Queens and Bronx prices are low?

Queens and Bronx have less demand as compared to Brooklyn or Manhattan

* + Why Queens and Bronx have less demand?

Queens and Bronx are less popular for tourists and prefer living closer to the center of the city.

* + - Why Queens and Bronx are less popular for tourists?

Tourists think that locations of properties in Queens and Bronx are d dangerous

* + - * Tourists think that locations of properties in Queens and Bronx are dangerous?

Properties are located in criminal areas