



DS102 & DS104  
FINAL PROJECT

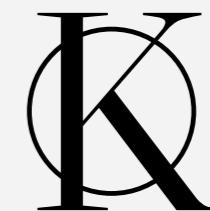
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# PROJECT PRESENTATION

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AFFENDI ABDULLAH





KRUGGR WEALTH  
MANAGEMENT

#### INTRODUCTION

Kruggr Wealth Management engaged us to find the most lucrative location to buy a few properties in the US Market. The intended purchase of these assets is to be made into a short term rental facilities for travels from abroad for a short getaway.

1. They specifically request to find out if the company needed to be verified to start renting

2. They also insisted that they needed to use expand all their budget for tax purposes





**R E S E A R C H**

SUB-QUESTIONS TO  
MAIN ENQUIRY



O B J E C T I V E

## TO FIND THE BEST LOCATIONS FOR PROPERTY PURCHASES

Since there are a multitude of concerns that affects the main questions, we came up with a list of questions to indirectly answer our client's inquiry to make a better informed decision on their purchase

S O L U T I O N

### 1 | Top 10 location with highest rental listings

To find the highest valued rental property and breakdown to the neighbourhood and district

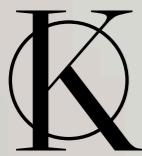
### 2 | Top 10 neighbourhood with the most affordable airbnb accommodations with high review

Values of such property tends to be more affordable and our client could purchase a few to maximise their budget. This also would answer their secondary question

### 3 | What are the popular accommodation type based on total review number?

Values of such property tends to be more affordable and our client could purchase a few to maximise their budget. This also would answer their secondary question





KRUGGR WEALTH  
MANAGEMENT



## OBJECTIVE

# TO FIND THE BEST LOCATIONS FOR PROPERTY PURCHASES

Since there are a multitude of concerns that affects the main questions, we came up with a list of questions to indirectly answer our client's inquiry to make a better informed decision on their purchase

## SOLUTION

### 4 | What is the highest number of property an owner/organisation can make in a neighbourhood group?

Competition on a highly lucrative rental area could be an issue. Our client should be be mindful of who they are up against with

### 5 | Does the year of building construction affect the rental price?

Should our client be interested in purchasing a heritage or colonial home to attract foreign tourist, they should know if there are any price difference that's involved

### 6 | Other than the condition of the accommodation and or host's services, does the location of the rental place plays a hand in the bad review?

Our client should also take a step further and find out if the area has historical past of criminal incidents to better protect their properties and rent

## INSIGHTS

### INITIAL RESEARCH INTO THE DATABASE

Before we dive into the questions, we equipped ourselves with the following fact from the datasheet



## INITIAL RESEARCH INTO THE DATABASE

### DATA SHEET DESCRIPTION

```
count    38012.000000
mean     748.115016
std      398.981556
min      60.000000
25%     404.000000
50%     746.000000
75%    1096.000000
max     1440.000000
```

**There are a total of 38012 useable rows / locations**

**Mean amount is at \$748 per night**

**Standard Deviation between prices is \$399**

**Cheapest rental amount is \$60 per night**

**25th Percentile of Price Per Night**

**50th Percentile of Price Per Night**

**75th Percentile of Price Per Night**

**Maximum rental amount is \$1440 per night**



## INITIAL RESEARCH INTO THE DATABASE

### DATA SHEET INFORMATION ON ROW TYPES

|                                |         |
|--------------------------------|---------|
| name                           | object  |
| host_identity_verified         | object  |
| host_name                      | object  |
| neighbourhood_group            | object  |
| neighbourhood                  | object  |
| instant_bookable               | object  |
| cancellation_policy            | object  |
| room_type                      | object  |
| construction_year              | float64 |
| price                          | float64 |
| service_fee                    | float64 |
| min_nights                     | float64 |
| review_numbers                 | float64 |
| last_review                    | object  |
| reviews_per_month              | float64 |
| review_rate_number             | float64 |
| calculated_host_listings_count | float64 |
| availability_365               | float64 |
| house_rules                    | object  |
| dtype: object                  |         |

1 property will have one host/ company who is in charge. The host/ company could also hold multiple properties in a single time thus, host\_name is a **categorical variable** here.

The 'neighbourhood\_group' series comprises of the following:

- Manhattan
- Brooklyn
- Queens
- Bronx
- Staten Island

The 'neighbourhood' and 'room\_type' (ie: private, shared, Entire home/apt) falls under this main category.

~id , latitude, longitude, price, minimum\_nights, number\_of\_reviews, last\_review, reviews\_per\_month, calculated\_host\_listings\_count, availability\_365 **are numerical variables**.

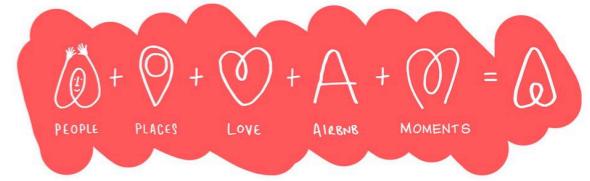


## QUESTION 1

# TOP 10 LOCATION WITH HIGHEST RENTAL LISTINGS

To find the highest valued rental property and breakdown to the neighbourhood and district

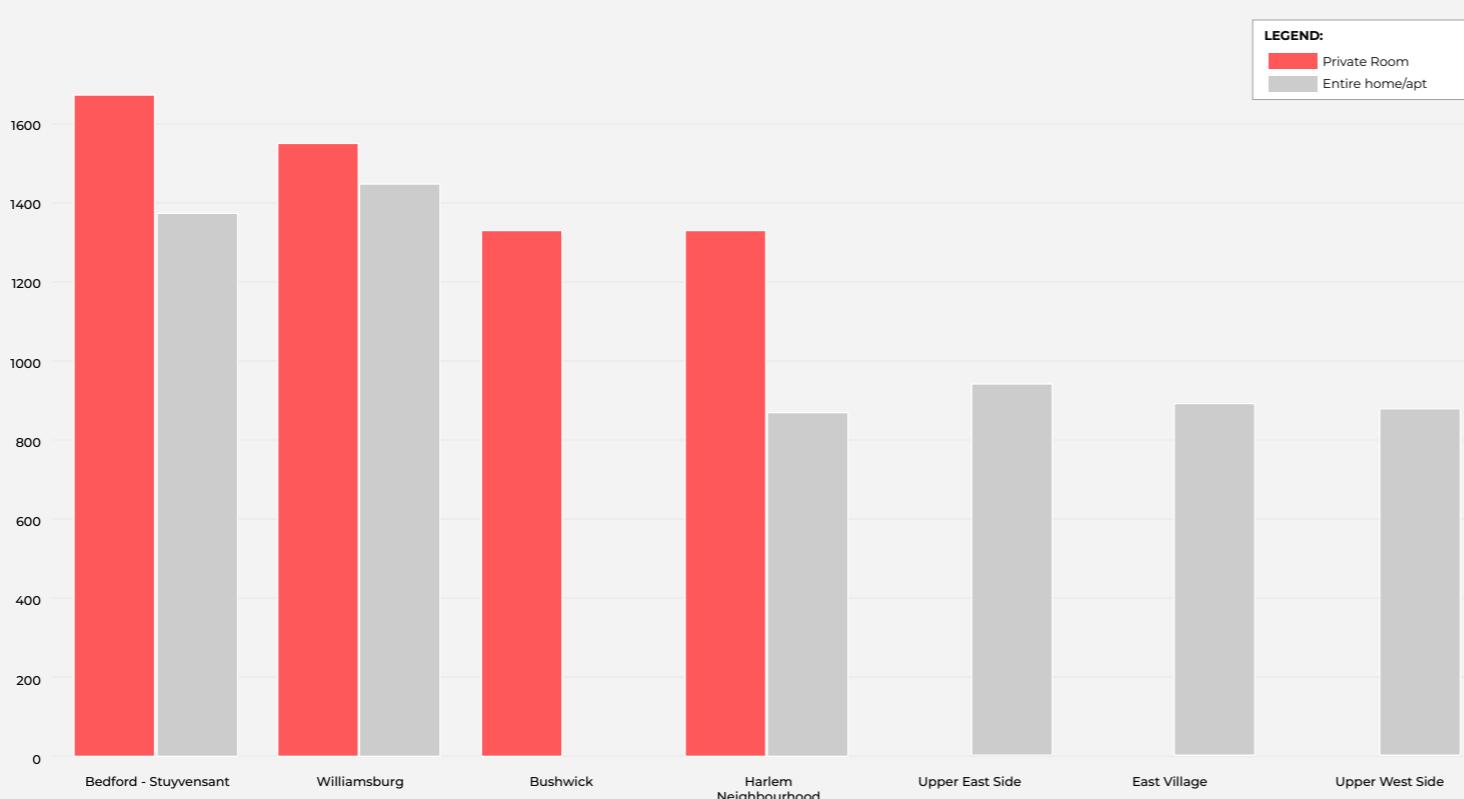




## QUESTION 1

**Top 10 Location with highest rental listings**

|      | neighbourhood_group | neighbourhood      | room_type       | price_pernight | total_listings |
|------|---------------------|--------------------|-----------------|----------------|----------------|
| 1673 | Brooklyn            | Bedford-Stuyvesant | Private room    | 841.0          | 13             |
| 1263 | Brooklyn            | Bedford-Stuyvesant | Entire home/apt | 1430.0         | 11             |
| 8001 | Brooklyn            | Williamsburg       | Entire home/apt | 647.0          | 11             |
| 8730 | Brooklyn            | Williamsburg       | Private room    | 767.0          | 11             |
| 1479 | Brooklyn            | Bedford-Stuyvesant | Private room    | 494.0          | 10             |
| 8676 | Brooklyn            | Williamsburg       | Private room    | 667.0          | 10             |
| 833  | Brooklyn            | Bedford-Stuyvesant | Entire home/apt | 475.0          | 9              |
| 1015 | Brooklyn            | Bedford-Stuyvesant | Entire home/apt | 882.0          | 9              |
| 1613 | Brooklyn            | Bedford-Stuyvesant | Private room    | 739.0          | 9              |
| 1666 | Brooklyn            | Bedford-Stuyvesant | Private room    | 827.0          | 9              |

**CONCLUSION**

The top highest rental listings for both **Private and Entire Home Apartment** could be located in the Bedford \_Stuyvesant in Brooklyn.

Price (inclusive of service fee) starts at \$1430/night for the entire apartment and \$841 for a private room

## QUESTION 2

# TOP 10 NEIGHBOURHOOD WITH THE MOST AFFORDABLE AIRBNB ACCOMODATIONS WITH HIGHEST REVIEW RATE NUMBER

Values of such property tends to be more affordable and our client could purchase a few to maximise their budget. This also would answer their secondary question



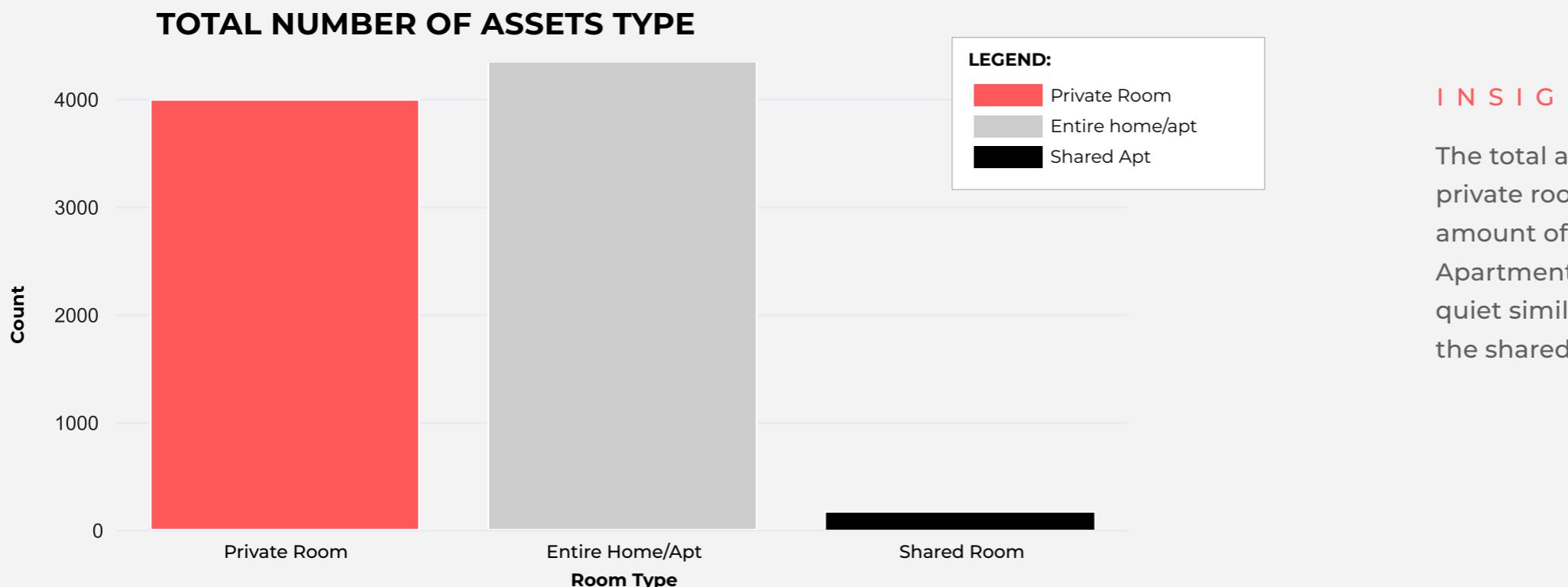
## QUESTION 2

**Top 10 neighbourhood with the most affordable airbnb accommodations with high review**

|              | <b>room_type</b> | <b>neighbourhood_group</b> | <b>neighbourhood</b> | <b>price_pernight</b> | <b>review_numbers</b> | <b>review_rate_number</b> |
|--------------|------------------|----------------------------|----------------------|-----------------------|-----------------------|---------------------------|
| <b>15239</b> | Private room     | Brooklyn                   | Crown Heights        | 60.0                  | 34.0                  | 5.0                       |
| <b>21763</b> | Entire home/apt  | Manhattan                  | Harlem               | 60.0                  | 2.0                   | 5.0                       |
| <b>28928</b> | Private room     | Queens                     | Flushing             | 61.0                  | 4.0                   | 5.0                       |
| <b>27100</b> | Entire home/apt  | Brooklyn                   | Greenpoint           | 61.0                  | 20.0                  | 5.0                       |
| <b>12130</b> | Entire home/apt  | Brooklyn                   | Greenpoint           | 61.0                  | 20.0                  | 5.0                       |
| <b>14077</b> | Private room     | Queens                     | Flushing             | 61.0                  | 4.0                   | 5.0                       |
| <b>6858</b>  | Entire home/apt  | Brooklyn                   | Prospect Heights     | 61.0                  | 12.0                  | 5.0                       |
| <b>23177</b> | Entire home/apt  | Manhattan                  | Hell's Kitchen       | 62.0                  | 8.0                   | 5.0                       |
| <b>15117</b> | Entire home/apt  | Manhattan                  | East Village         | 62.0                  | 26.0                  | 5.0                       |
| <b>5404</b>  | Entire home/apt  | Brooklyn                   | Carroll Gardens      | 62.0                  | 96.0                  | 5.0                       |

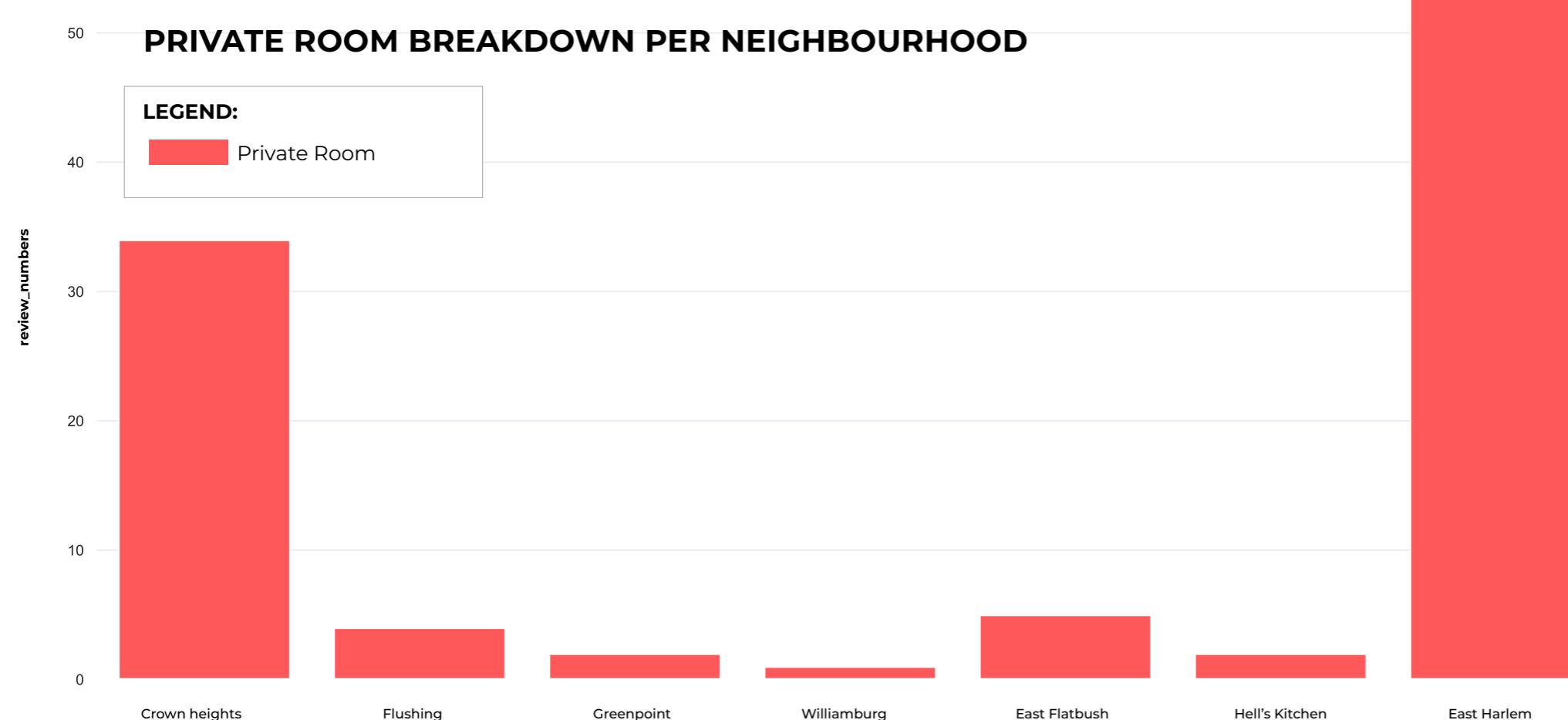
## CONCLUSION

At a common 5 star rating with the most number of reviews and a affordable rental price of \$60 per night, the Crown Heights, Brooklyn takes the lead.



### INSIGHTS

The total amount of private rooms vs the total amount of Entire Apartment looks to be quiet similar as oppose to the shared room options



### CONCLUSION

Client could consider getting a private room as it is significantly cheaper in purchase the an entire apartment and provides a peace of mind for safety as oppose to the shared room option

### QUESTION 3

WHAT ARE THE  
POPULAR  
ACCOMODATION  
TYPE BASED ON  
THE PAST TOTAL  
REVIEW NUMBER?

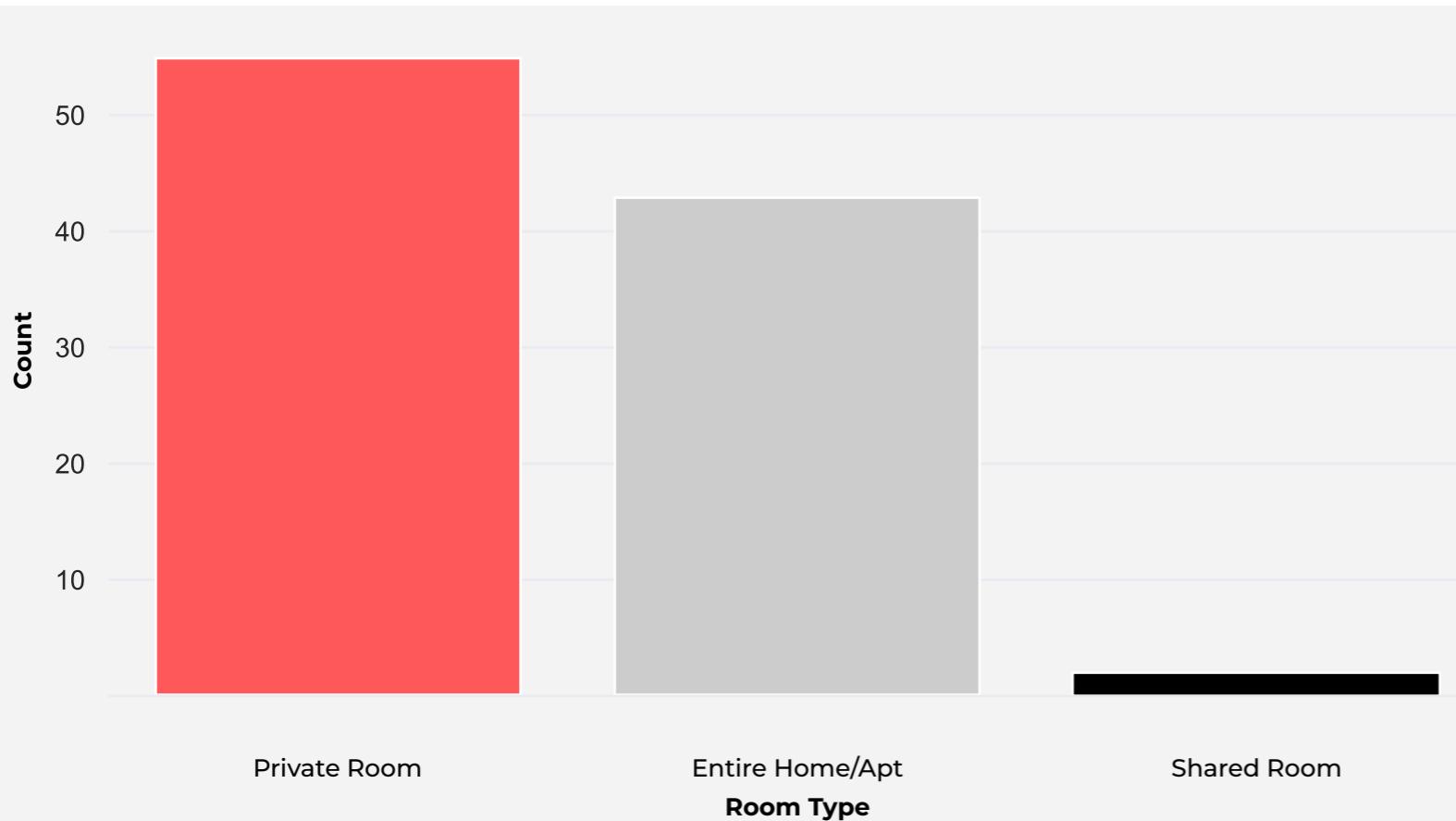
Values of such property tends to be more affordable and our client could purchase a few to maximise their budget. This also would answer their secondary question



## QUESTION 3

**What are the popular accommodation type based on past total review number?**

|             | room_type       | neighbourhood_group | neighbourhood       | price_pernight | review_numbers | review_rate_number |
|-------------|-----------------|---------------------|---------------------|----------------|----------------|--------------------|
| <b>7124</b> | Private room    | Queens              | Jamaica             | 354.0          | 576.0          | 5.0                |
| <b>539</b>  | Private room    | Queens              | Flushing            | 1103.0         | 474.0          | 5.0                |
| <b>5067</b> | Private room    | Queens              | East Elmhurst       | 475.0          | 448.0          | 5.0                |
| <b>1075</b> | Entire home/apt | Manhattan           | Tribeca             | 84.0           | 447.0          | 5.0                |
| <b>101</b>  | Entire home/apt | Queens              | Astoria             | 558.0          | 414.0          | 5.0                |
| <b>5373</b> | Private room    | Queens              | Richmond Hill       | 89.0           | 408.0          | 5.0                |
| <b>689</b>  | Entire home/apt | Brooklyn            | Williamsburg        | 986.0          | 404.0          | 5.0                |
| <b>67</b>   | Entire home/apt | Brooklyn            | South Slope         | 1246.0         | 398.0          | 5.0                |
| <b>4576</b> | Private room    | Brooklyn            | Bedford-Stuyvesant  | 1178.0         | 397.0          | 5.0                |
| <b>7545</b> | Private room    | Queens              | Springfield Gardens | 1373.0         | 375.0          | 5.0                |



## CONCLUSION

Past total reviews have shown that private rooms is still the favourite room type which typically houses 1-2 person travellers

## QUESTION 4

WHAT IS THE HIGHEST NUMBER OF PROPERTY AN OWNER/ ORGANISATION CAN MAKE IN A NEIGHBOURHOOD GROUP?

Competition on a highly lucrative rental area could be an issue. Our client should be be mindful of who they are up against with



## FINAL PROJECT | DS102 & DS104

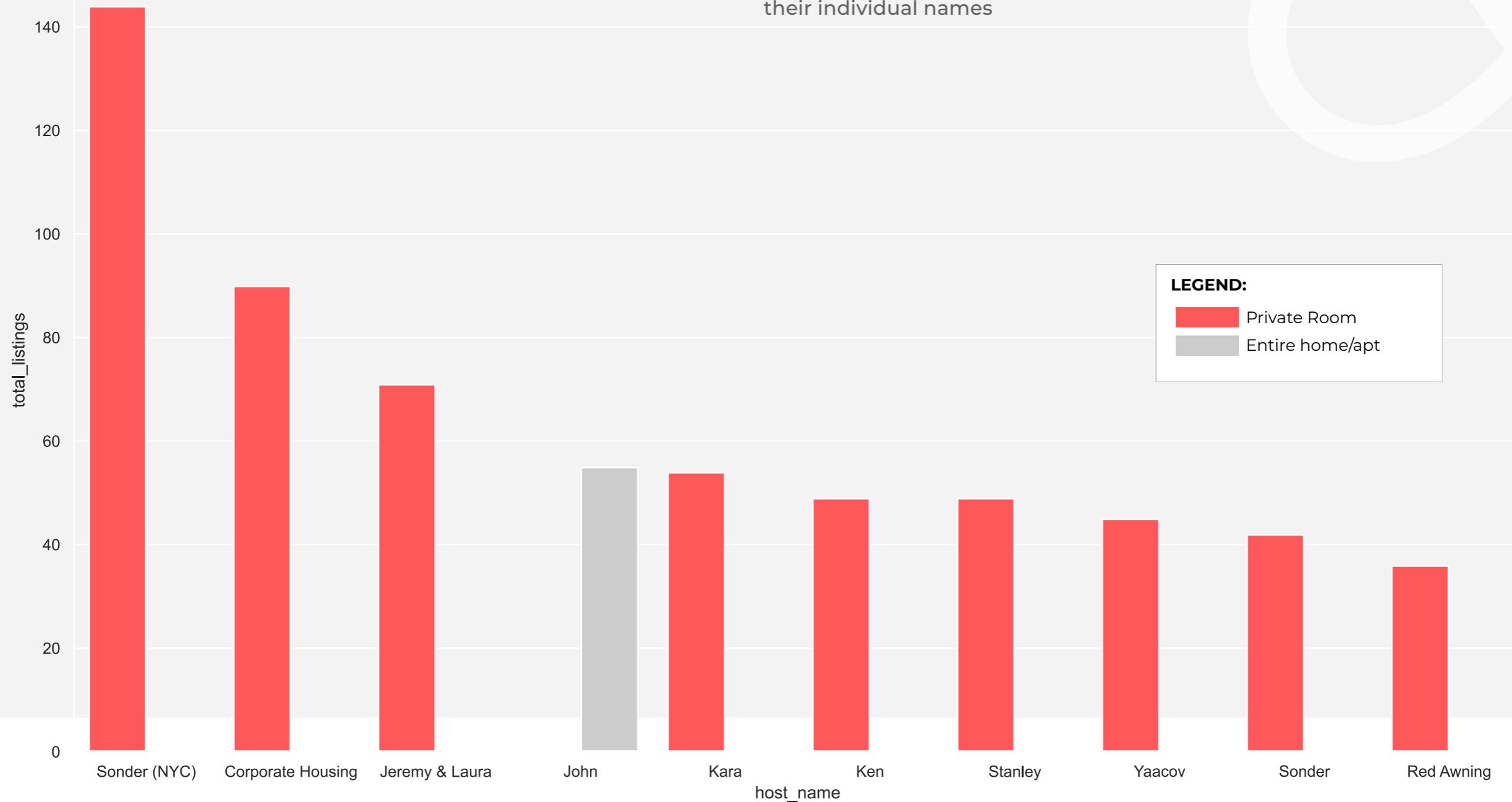
### QUESTION 3

|    | <b>host_name</b>  | <b>neighbourhood_group</b> | <b>room_type</b> | <b>total_listings</b> |
|----|-------------------|----------------------------|------------------|-----------------------|
| 30 | Sonder (NYC)      | Manhattan                  | Entire home/apt  | 144                   |
| 5  | Corporate Housing | Manhattan                  | Entire home/apt  | 90                    |
| 11 | Jeremy & Laura    | Manhattan                  | Entire home/apt  | 71                    |
| 14 | John              | Manhattan                  | Private room     | 55                    |
| 17 | Kara              | Manhattan                  | Entire home/apt  | 54                    |
| 21 | Ken               | Manhattan                  | Entire home/apt  | 49                    |
| 32 | Stanley           | Manhattan                  | Entire home/apt  | 49                    |
| 36 | Yaacov            | Manhattan                  | Entire home/apt  | 45                    |
| 29 | Sonder            | Manhattan                  | Entire home/apt  | 42                    |
| 27 | Red Awning        | Manhattan                  | Entire home/apt  | 36                    |

### CONCLUSION

Past total reviews have shown that private rooms is still the favourite room type which typically houses 1-2 person travellers

## TOTAL NUMBER OF COMPANY COMPETITORS VS PROPERTIES OWNED



## CONCLUSION

Majority of the owners owns private rooms for rental out. We could also figure out the different company that's with in the district by googling their individual names

## QUESTION 5

DOES THE YEAR  
OF BUILDING  
CONSTRUCTION  
AFFECT THE  
PRICE?

Should our client be interested in purchasing a heritage or colonial home to attract foreign tourist, they should know if there are any price difference that's involved



# 2003

|            | <b>room_type</b> | <b>construction_year</b> | <b>price_pernight</b> |
|------------|------------------|--------------------------|-----------------------|
| <b>182</b> | Private room     | 2003.0                   | 1385.0                |
| <b>20</b>  | Private room     | 2003.0                   | 1360.0                |
| <b>315</b> | Private room     | 2003.0                   | 1180.0                |
| <b>104</b> | Private room     | 2003.0                   | 538.0                 |
| <b>227</b> | Private room     | 2003.0                   | 528.0                 |
| <b>138</b> | Private room     | 2003.0                   | 304.0                 |

# 2022

|            | <b>room_type</b> | <b>construction_year</b> | <b>price_pernight</b> |
|------------|------------------|--------------------------|-----------------------|
| <b>173</b> | Private room     | 2022.0                   | 68.0                  |
| <b>174</b> | Private room     | 2022.0                   | 71.0                  |
| <b>295</b> | Private room     | 2022.0                   | 917.0                 |
| <b>472</b> | Private room     | 2022.0                   | 120.0                 |

## CONCLUSION

Yes there is a major price difference between the properties that was built in the late 2003 and 2022. We could safely conclude that probably that was build could also impact the price difference

## QUESTION 6

OTHER THAN THE CONDITION OF THE ACCOMODATION AND OR HOST'S SERVICES, DOES THE LOCATION OF THE RENTAL PLACE PLAYS A HAND IN THE BAD REVIEW?

Our client should also take a step further and find out if the area has historical past of criminal incidents to better protect their properties and rent



**ALL LISTINGS WITH RATING OF 1**

|          | <b>neighbourhood</b> | <b>total_listings</b> |
|----------|----------------------|-----------------------|
| <b>0</b> | Crown Heights        | 1                     |
| <b>1</b> | Williamsburg         | 1                     |
| <b>2</b> | East Village         | 1                     |
| <b>3</b> | Harlem               | 2                     |
| <b>4</b> | Hell's Kitchen       | 1                     |
| <b>5</b> | Midtown              | 1                     |
| <b>6</b> | West Village         | 1                     |
| <b>7</b> | Astoria              | 1                     |
| <b>8</b> | Sunnyside            | 1                     |

**C O N C L U S I O N**

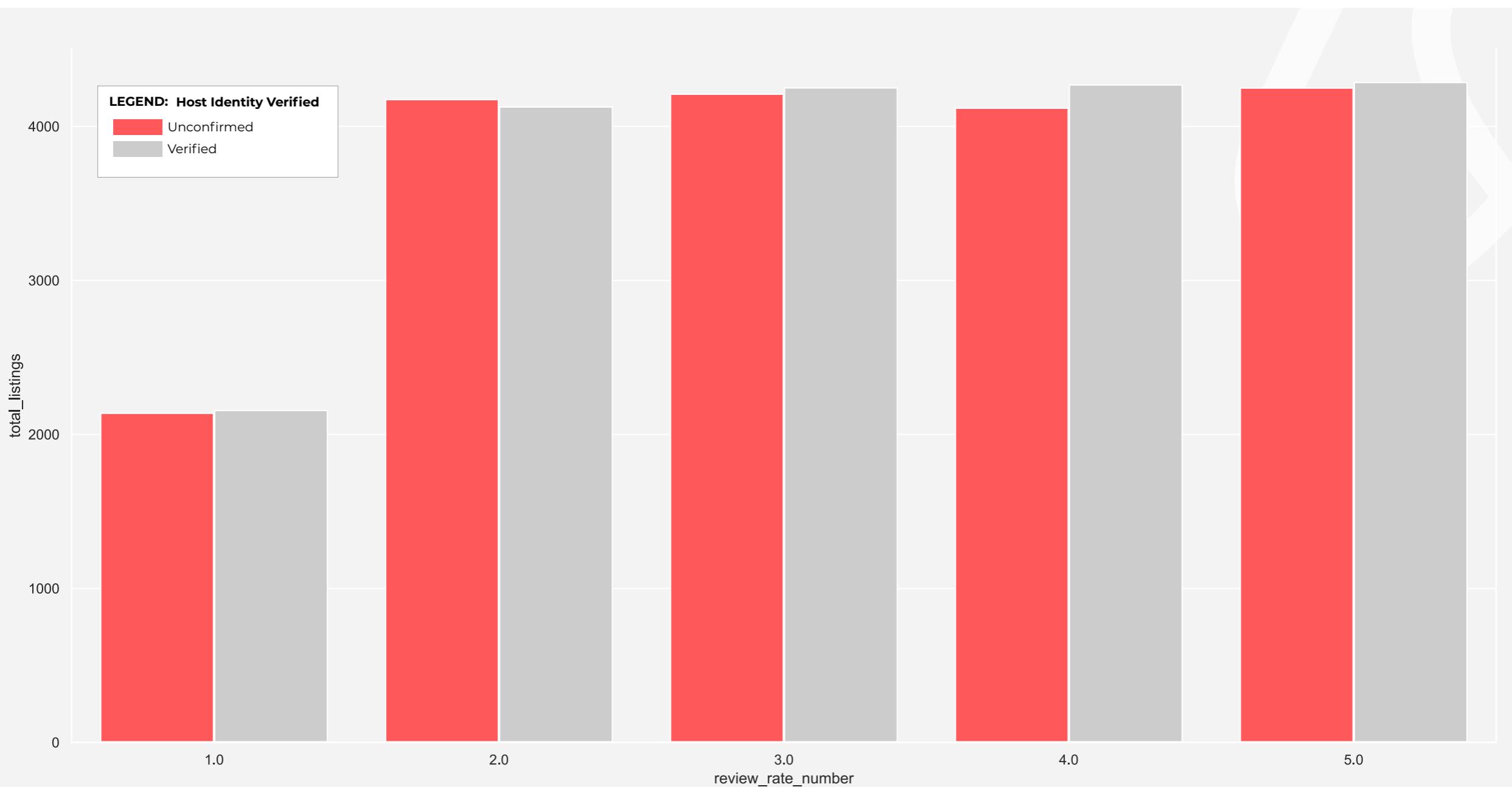
No. Most of the bad reviews are from a 1 off location

## QUESTION 7

DOES THE BEING  
VERIFIED MATTER  
FROM THE  
PERSPECTIVE OF THE  
NUMBER OF REVIEWS  
FROM CUSTOMERS

Our client should also take a step further and find out if the area has historical past of criminal incidents to better protect their properties and rent





## CONCLUSION

The number of verified owner vs the unverified owners seems to only have a slight difference. We could say that the renter does not mind if the host/hostess is not verified

## SUMMARY IN CONCLUSION

We suggest that Kruggr purchase a number of Entire home properties as well as private rooms in the Brooklyn area to maximise their per annual income. They should also look into buying some assets in the Manhattan area since many of the corporate rental competitor are there and the area is the business district park.

They could also see if the building / apartment they are purchasing have any historically value that they could place a story on thus increasing its value.

They do not have to worry about the surrounding area that could eventually deteriorate the assets value



SUMMARY  
THANK YOU