Capstone Project: Airbnb Listings Bangkok

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Dashboard Link:
https://public.tableau.com/views/CapstoneProjectIvanTaufiqurrahmanAirbnbListingsBangkok/SummaryDashboard?:language=en-US&publish=yes&:sid=&:redirect=auth&:display_count=n&:origin=viz_share_link

Video penjelasan link:
https://youtu.be/3qI59GSjtgE

Introduction

This analysis uncover Airbnb markets in Bangkok with focus on the problem of increasing demand.

The dataset consists from listing and host informations like the listing id, host id, neighbourhood, listings position to more listings focused like room type, number of review, minimum night to book, price, and availability of listing to book.

Business Problem and Goals

How can Airbnb listings in Bangkok **adapt to and accommodate the increasing demand** from 2023 onwards, while **ensuring balanced growth across neighbourhoods** in Bangkok?
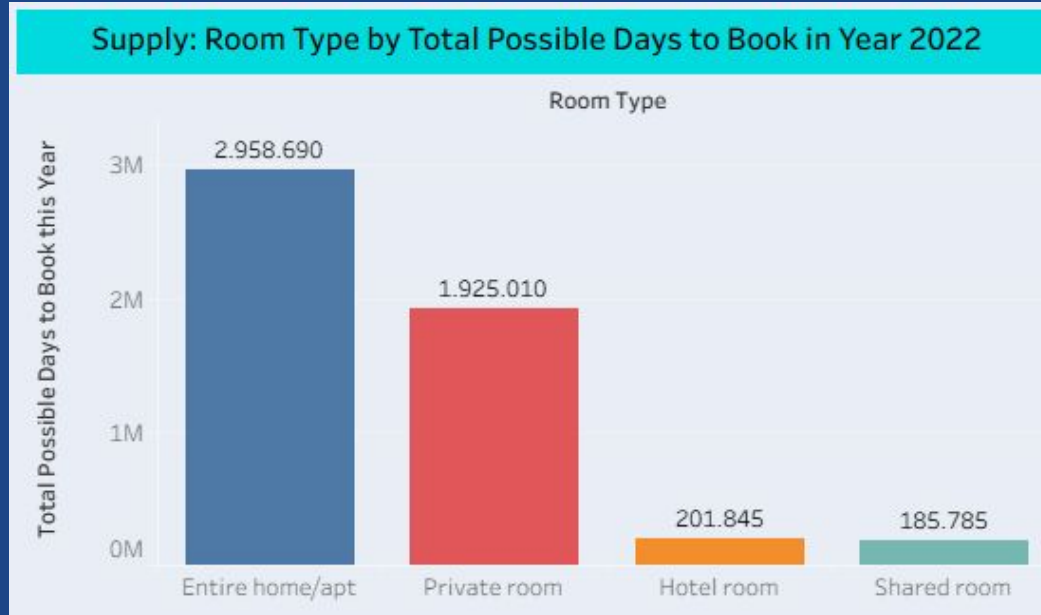
To tackle this problem it is necessary to divide the analysis into 2 focused analysis, **demand analysis** and **supply analysis**.

By identifying the core problem, this analysis will yield the optimal solution and also searching for undiscovered opportunity that will make Airbnb listings in Bangkok flourish.

Visualizations, Insight, and Analysis

Supply Analysis

How diverse is the Room Type in Airbnb Bangkok?

Supply: Room Type by Total Possible Days to Book in Year 2022

Room Type

Total Possible Days to Book this Year

- Entire home/apt: 2.958.690
- Private room: 1.925.010
- Hotel room: 201.845
- Shared room: 185.785

Dominating :
- Entire home/apt (55%) : 3 Million possible days
- Private room (37%) : 2 Million possible days

Negligible:
- Hotel room (3,7%) : 200K possible days
- Shared room (3,4%) : 185K possible days

What the most common offered category stay?

Supply: Category Stay by Total Possible Days to Book in Year 2022

Short
3.796.730 Booked Days

Medium
713.575 Booked Days

Long
612.470 Booked Days
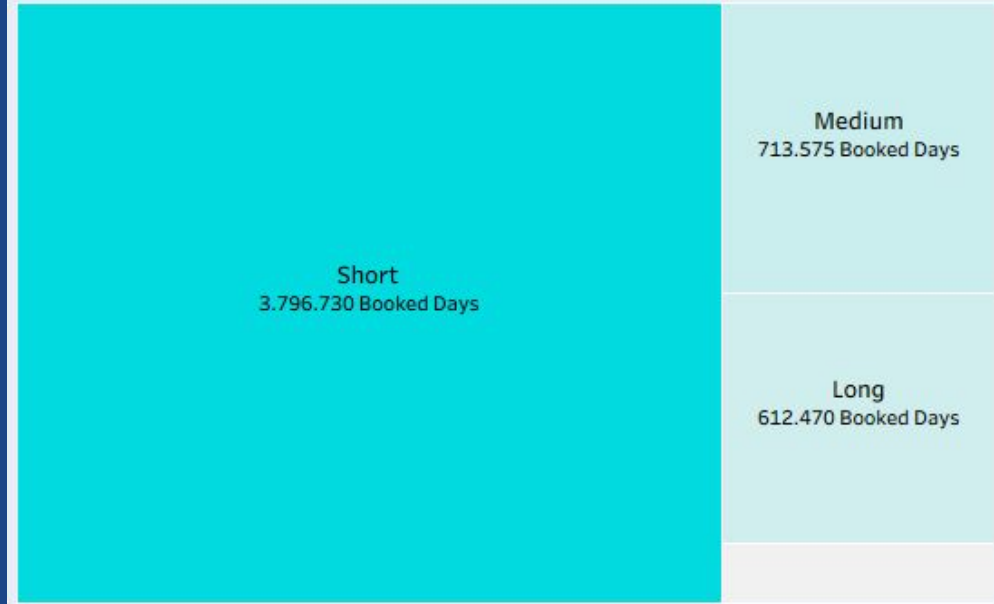
- **Short Stay** (1-6 days) : **3.8 Million** available days to book
- **Medium Stay** (7-29 days) : **713K** available days to book
- **Long Stay** (30-90 days) : **612K** available days to book
- **Extended** (90+ days) : **150K** available days to book

KPI section in Supply Analysis

Lowest Mean Price Neighbourhood	Highest Mean Price Neighbourhood	Max Possible Book	Top Host
Bang Sue $1,034	Parthum Wan $2,179	5,271,330 Days	Curry 221 Listing

- Price Diversity: Lowest mean → Bang Sue (1034 Baht) & Highest mean → Parthum Wan (2179 Baht)
- Maximum Possible Book: 5.2 Million Days
- Top Host: Curry (221 Listings)

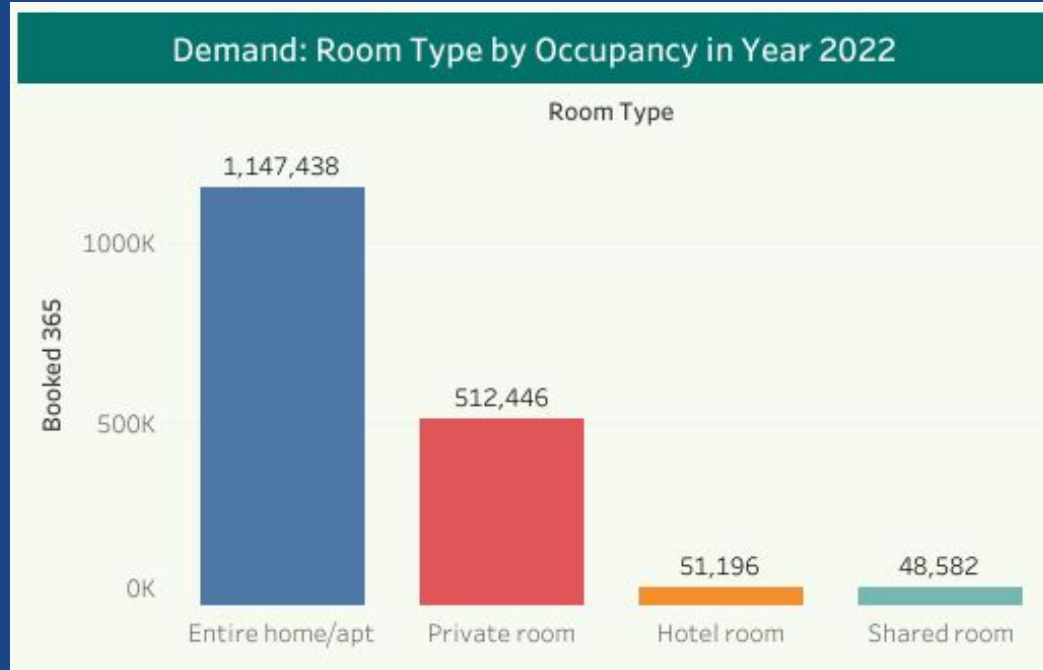# Pareto Chart: Top 16 Neighbour Domination across Bangkok

- Top 16 Neighbourhood based on number of listings dominate 80% of Total listings in Bangkok.

- Khlong Toei have more than 1800 Listings and Vadhana have more than 1700 listings.

- Half of Neighbourhood is under-penetrated in terms of number of listing (no more than 150).

Supply: Pareto Chart Neighbour Domination based on Possible Days to Book in Year 2022

Top 16 Neighbourhood Dominates 80 % of Total Listings in Bangkok
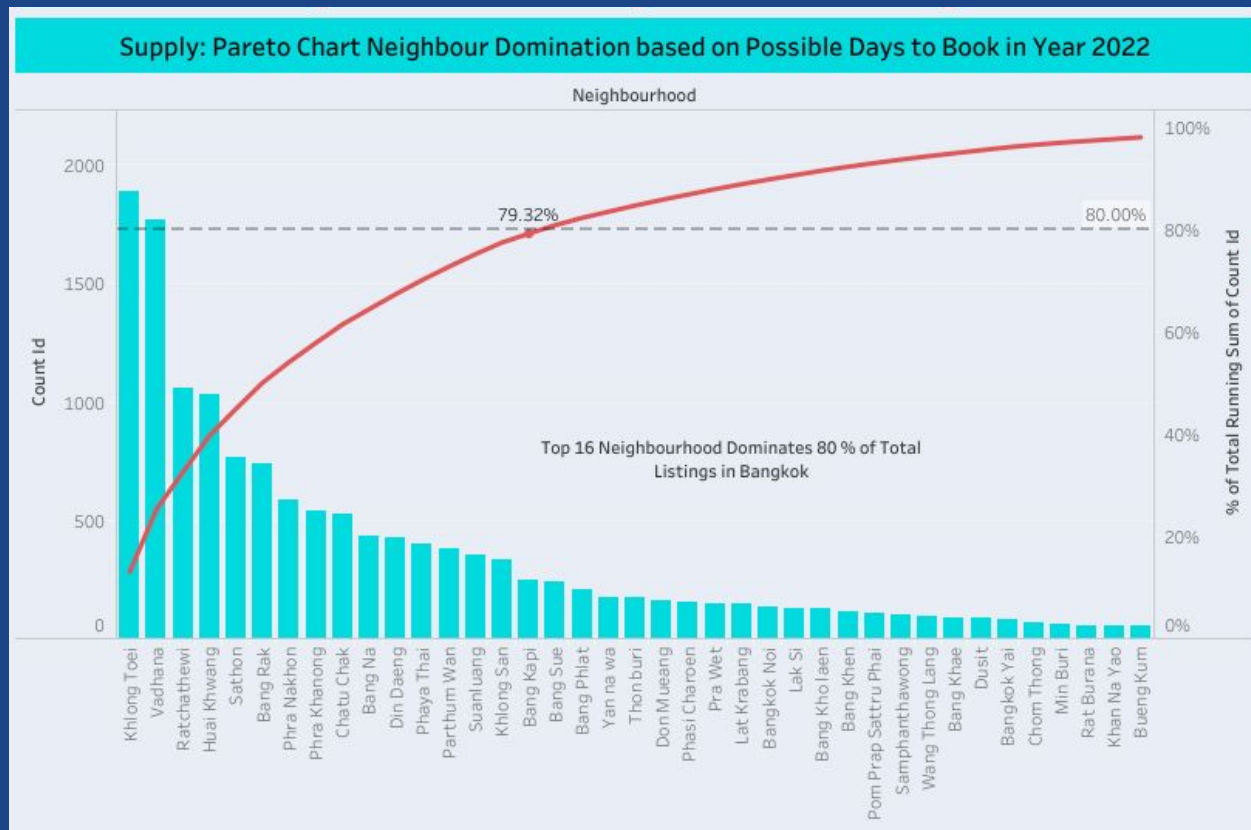
Note: Not enough space for all neighbour in this Pareto Chart

Demand Analysis
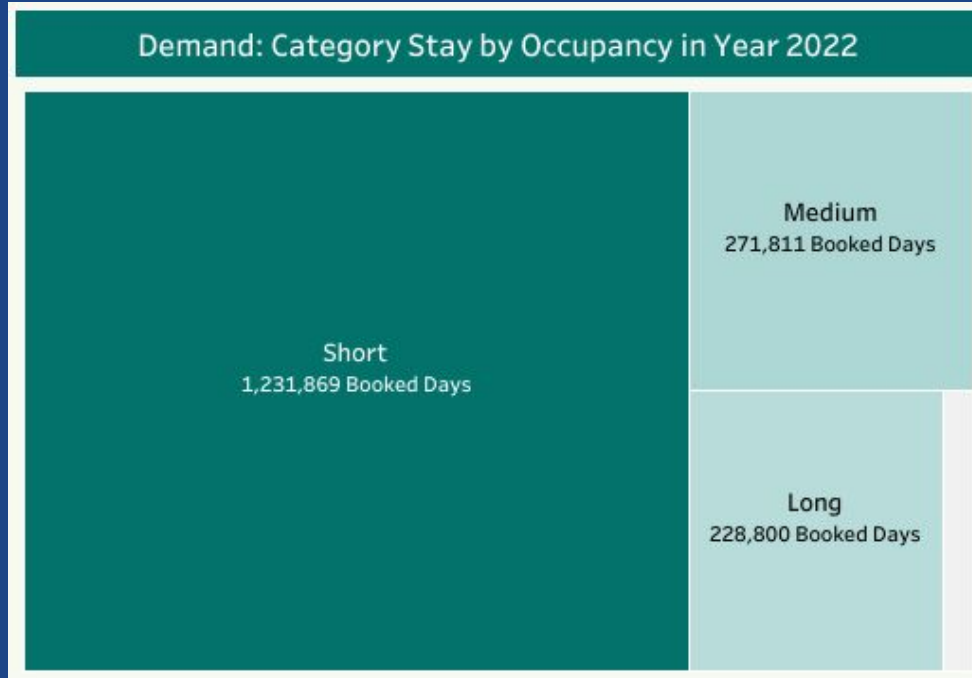
What Customer think the best room type to rent?

Demand: Room Type by Occupancy in Year 2022

Room Type

1,147,438

512,446

51,196

48,582

Booked 365

| Entire home/apt | Private room | Hotel room | Shared room |

Dominating :
- **Entire home/apt (62%) : 1.1 Million booked days**
- **Private room (29%) : 512K booked days**

Negligible:
- **Hotel room (2,9%) : 52K booked days**
- **Shared room (2,7%) : 49K booked days**

Is Minimum Night a big factor to choose place to rent?

Demand: Category Stay by Occupancy in Year 2022

Short
1,231,869 Booked Days

Medium
271,811 Booked Days

Long
228,800 Booked Days

- **Short Stay** (Minimum night booked 1-6 days) : **1.2 Million** booked days
- **Medium Stay** (Minimum night booked 7-29 days) : **271K** abooked days
- **Long Stay** (Minimum night booked 30-90 days) : **228K** booked days
- **Extended** (Minimum night booked 90+ days) : **27K** booked days

Achievement and Trends in Year 2022

Revenue Year 2022	Daysbooked this year	Popular Room Type	Popular Category Stay
$2,785,647,102 39.24% of All years combined	**1,759,662 Booked Days** 33.38% possible booked days	**Entire home/apt** 38.78 %	**Short** 32.45%

- Revenue in Year 2022: 2.78 Billion Baht
- Total Booked Days: 1.759 Million Days
- Most Popular Room Type: Entire home/apt
- Most Popular Category Stay: Short Stay (1-6 Minimum night)

Is more place to rent in neighbourhood equals more booked days?

- All the Top 16 neighbour that Dominate with huge number of listings in their neighbour also dominate in booked days number.

- Another possibility of the same neighbour group dominate in this chart is that neighbour is tourist-heavy area or near the tourist area or have easy access to transportation like train or bus.

Demand: Pareto Chart Neighbour Domination based on Occupancy in Year 2022
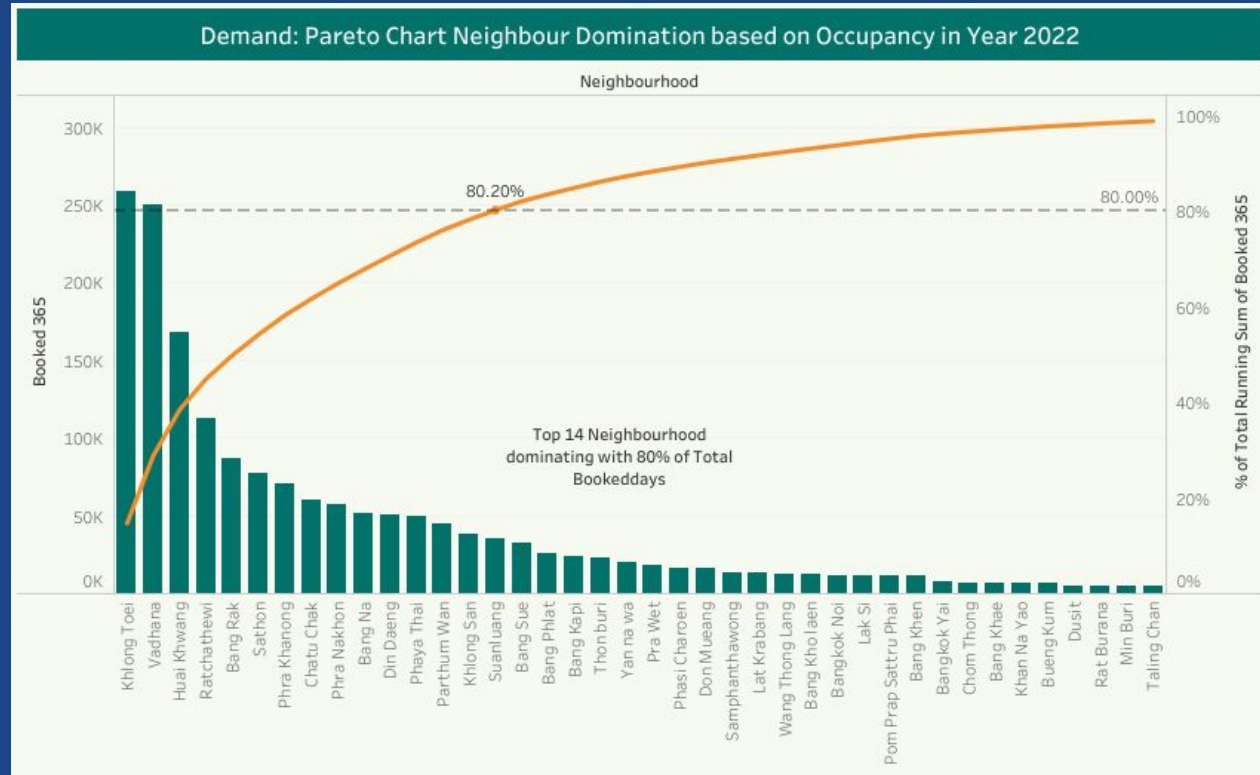
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Summary

Airbnb listings Bangkok Growth

Total Revenue Airbnb From 2012-2022	Revenue each Year from 2012-2021	Total Unique Listings	Total Unique Host
$7,099,059,817	$431,341,272	6,191 Unique Listings	4,974 Unique Host

Revenue each Year from 2012 to 2021 is about **431 Million Baht** or 4.3 Billion Baht in Total. Due to **massive success in Year 2022,** the **all years Revenue of Airbnb is** increasing a lot to 7.1 Billion Baht.

With **Average of 1.2 listings per host**, that means mostly host still **individual operators** who try to sell a place to rent for people in vacation.

Occupancy comparison, is there any trend shift

- **Entire home/apt is consistent leader** and dominate in Room Type all years and still growing. The proof from that growth can be seen in Booked Days in Year 2022 with almost half of total booked days from 2012-2021 combine.
- Private room also has potential with 500K booked days in 2022 alone or 4 times the number of accumulation booked days for private room in 2012-2021.

- **There is Trend shift in category stay** that can be see from huge number of **people choosing** place with low minimum **night** or **short stay most of the times in 2022, while in** 2012-2021 the most popular stay is the extended stay.
- Possibility of trend shift in bangkok is due to strong tourist rebound post-covid pandemic.

Conclusion & Actionable Recommendation

Conclusion	Actionable Recommendation
Record breaking revenue in 2022 with 2.7 Billion Baht	Airbnb in Bangkok still growing. Many neighbour not optimally marketed can be advertised more aggressive to customer with discount or bonus.
Only 14 Neighbour dominate in terms of booked days in Bangkok	Give incentive for hosts to open new place to rent in under-penetrated neighbour with lower cut percentage for every new listings
Customer preference in entire homes as place to rent	Gives more bonus for customer who choose room type other than entire home/apt or suggesting a new host to rent entire homes not only private rooms, shared rooms, or hotel room.
Customer times preference in short stay in Bangkok	Gives advice for the host to lower minimum night to book for better opportunity to book by customer or gives discount for customer who choose other than short stay as times preference when booking a place

Thank you