

Project Idea & Goal

Identify how Airbnb revenue factors generated by Citibike traffic/usage. Does more Citibike stations in New York City make an Airbnb rental more attractive and lucrative to their customers, and how can Airbnb generate more revenue based on Citibike traffic/usage? Which areas in New York City contains the most Citibike traffic/usage, and how can they contribute values to Airbnb in post-pandemic season?

The goal is this project is to analyze these questions will help Airbnb have a better understanding on which areas should they promote more/less to overcome its post-pandemic financial stress and how can they generate more revenues efficiently.

Project Issue

According to Airbnb earnings in Q4. The company posted an enormous loss in the fourth quarter of 2020 as it suffered from the pandemic downturn and revenue has dropped 30% in 2020 compared to previous year. To effectively solve this issue, we want to understand the correlation between Airbnb listings revenue and the Citibike traffic/usage in New York City. The opportunity may arise based on our findings in this project which will allow Airbnb to potentially understand lucrative rental locations and hot zones that may bring profits to the company.

Business & Technical Justification

High-level Business Initiative:

- ➔ Analyzing data for Airbnb listings and Citibike traffic/usage to help generate more revenue for Airbnb (post-pandemic)

BI Sponsors and Stakeholders (who will own this project?)

- ➔ BI Sponsor: Program managers and Airbnb executives
- ➔ Stakeholder: market researchers, data scientists, managers, hosts, tourist, communities

What's the Business Value?

- ➔ Recover revenue lost from the global pandemic by improving customer satisfaction and promoting listings in regions highly served, and where revenue potential is heightened.

How long will the project last? How much will this cost?

- ➔ We plan to complete the project within a defined scope and time period for 2-3 months. The project cost will be based on labor, research, and tool used to get the project done.

Data sources:

- ➔ Main: NYC Airbnb data complied (September 2021) | <http://insideairbnb.com/get-the-data.html>
- ➔ Secondary: NYC Citibike trip data | <https://ride.citibikenyc.com/system-data>

Potential technical tools:

- ➔ Modeling: Lucid Chart/Microsoft Visio
- ➔ Data Warehouse Cloud/ETL: Google BigQuery, Python
- ➔ Business Intelligence dashboard: Tableau or Google Data Studio

Any new types of technologies needed?

ETL commercial tool (TBD)

Potential Key Performance Indicators (KPI's)

- Average rental ratings per location (by borough)
- Average price per rental per location (by borough)
- Revenue generated per customer per location (by borough)
- CitiBike trips for each station vs listings price per location
- Number of Citibike rentals vs number of Airbnb rentals
- Revenues generated per location vs trip duration from start to end station