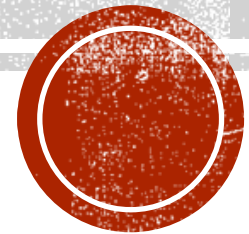


DATA VISUALIZATION PROJECT -- POWER BI

KPI DASHBOARD FOR A HOSPITALITY CLIENT



BUSINESS OBJECTIVE

- AtliQ is a company that owns multiple hotel chains across various cities of India
- The Managing director / CEO of AtliQ wants to incorporate 'Business and Data Intelligence' to identify and track the source of revenue for AtliQ hotels
- Hence, it is decided to develop a KPI Dashboard for AtliQ, using May-22 to July-22 data, which can help track its revenue sources and other relevant KPIs across various dimensions
- It'll help the management take strategic business decisions based on the insights generated from the dashboard



PROBLEM STATEMENT / PROJECT SCOPE

- Identify the data sources pertaining to revenue management
- Clean and model the data as per requirement for analysis
- Create a revenue dashboard that measures important KPIs
- Relevant filters need to be provided to slice and dice the data
- The dashboard should depict both high level and granular insights



SOLUTION APPROACH

- There are 5 tables provided for tracking revenue, 3 dimension tables (date, hotel, room) and 2 fact tables (bookings, aggregated bookings)
- Power BI was the tool used for creating the visualization/dashboard
- The data was imported, analysed and transformed as per necessity within Power Query
- The relationships between the tables were created within Power Pivot



DATA CLEANING/TRANSFORMATION IN POWER QUERY

The screenshot displays the Microsoft Power Query Editor interface. The top ribbon includes tabs for File, Home, Transform, Add Column, View, Tools, and Help. The Transform tab is active, showing various data manipulation options like Merge Queries, Append Queries, and Combine Files. The main workspace shows a query named 'fact_aggregated_bookings' with the formula bar containing the M code: `= Table.TransformColumnTypes("#Promoted Headers",{{"property_id", type text}, {"check_in_date", type date}, {"room_category", type text},`

On the right, the 'Query Settings' pane shows the query name 'fact_aggregated_bookings' and a list of applied steps: 'Source', 'Promoted Headers', and 'Changed Type'.

The data preview table at the bottom shows 5 columns and 999+ rows. The columns are: property_id, check_in_date, room_category, successful_bookings, and capacity. The data is filtered to show the top 1000 rows based on column profiling.

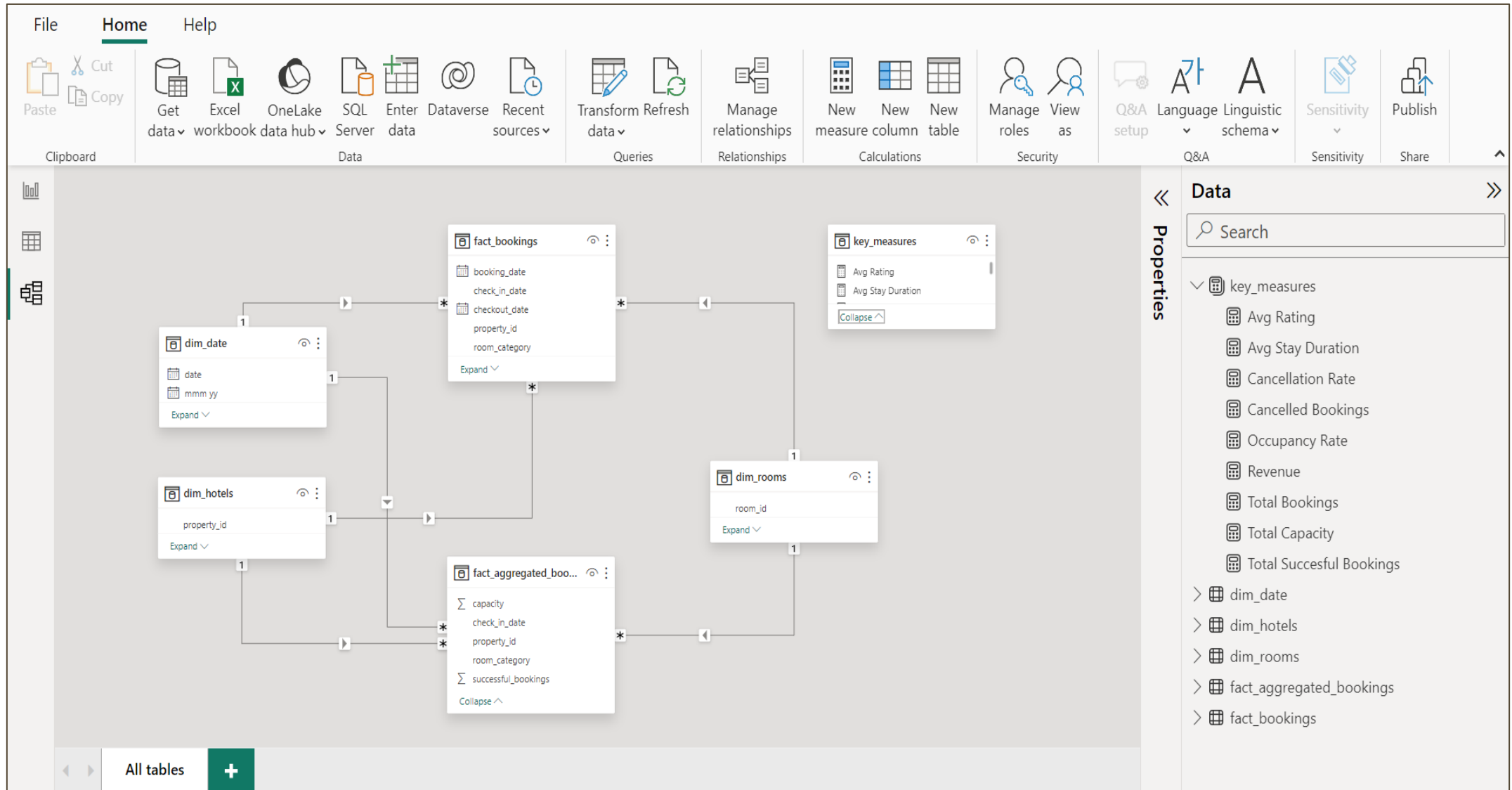
	property_id	check_in_date	room_category	successful_bookings	capacity
1	16559	01-05-2022	RT1	25	30
2	19562	01-05-2022	RT1	28	30
3	19563	01-05-2022	RT1	23	30
4	17558	01-05-2022	RT1	13	19
5	16558	01-05-2022	RT1	18	19
6	17560	01-05-2022	RT1	28	40
7	19558	01-05-2022	RT1	25	40
8	19560	01-05-2022	RT1	23	26
9	17561	01-05-2022	RT1	22	26
10	16560	01-05-2022	RT1	24	34
11	16561	01-05-2022	RT1	16	18
12	16562	01-05-2022	RT1	20	31
13	16563	01-05-2022	RT1	36	41
14	17559	01-05-2022	RT1	26	32
15	17562	01-05-2022	RT1	12	20
16	17563	01-05-2022	RT1	21	25
17	18558	01-05-2022	RT1	11	15
18	18559	01-05-2022	RT1	29	42
19	18561	01-05-2022	RT1	31	33
20	18562	01-05-2022	RT1	34	38
21	18563	01-05-2022	RT1	18	27
22	19559	01-05-2022	RT1	18	24

5 COLUMNS, 999+ ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 04:15 PM



DATA MODELLING IN POWER PIVOT



SOLUTION APPROACH

- A few measures were created to calculate the KPIs as shown below:

Revenue = Sum of revenue_realized from Bookings table (in Rs.)

Total bookings = Count of booking_id from Bookings table

Avg rating = Average of ratings from Bookings table

Total capacity = Sum of capacity from Aggregated bookings table

Total successful bookings = Sum of successful bookings from Aggregated bookings table



SOLUTION APPROACH

- A few measures were created to measure the KPIs as shown below:

Occupancy rate = Total successful bookings / Total capacity (in %)

Total cancelled bookings = Count of booking_id with status='cancelled' from Bookings table

Cancellation rate = Total cancelled bookings / Total bookings (in %)

Avg stay duration = Average days stayed by customer in a room per booking



REVENUE DASHBOARD

AtliQ Hospitality - Revenue Insights

May 22

Jun 22

Jul 22

1.7bn
Revenue

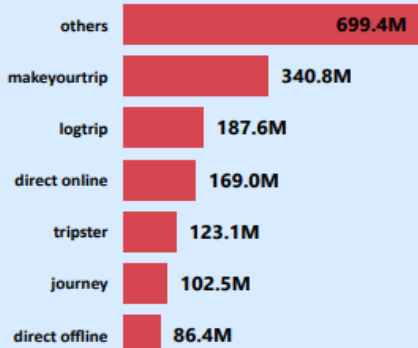
57.9%
Occupancy Rate

24.8%
Cancellation Rate

3.6
Avg Rating

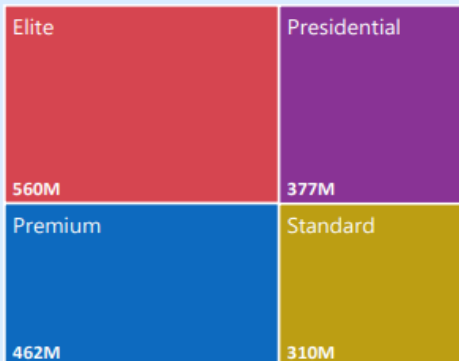
2.4
Avg Stay Duration

Revenue By Platform

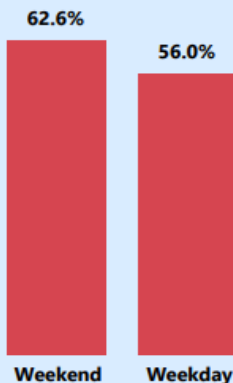


Revenue By Room Type

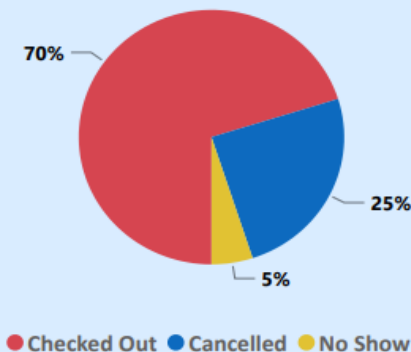
● Elite ● Premium ● Presidential ● Standard



Occupancy Rate By Day Type



No. of Bookings By Booking Status



City

All

Booking Status

All

Booking Platform

All

Revenue By Cities

City	Revenue	Occupancy Rate	Cancellation Rate	Avg Rating	Avg Stay Duration
Mumbai	668.6M	57.9%	24.7%	3.7	2.4
Bangalore	420.4M	55.8%	25.0%	3.4	2.4
Hyderabad	325.2M	58.1%	24.6%	3.7	2.4
Delhi	294.5M	60.5%	25.1%	3.8	2.3

Revenue By Property_Name

Property_Name	Revenue	Occupancy Rate	Cancellation Rate	Avg Rating	Avg Stay Duration
Atliq Exotica	320.3M	57.3%	24.4%	3.6	2.7
Atliq Palace	304.1M	60.0%	25.2%	3.7	1.8
Atliq City	285.8M	59.5%	24.9%	3.7	1.8
Atliq Blu	260.9M	62.0%	24.7%	4.0	2.8
Atliq Bay	260.1M	58.4%	24.8%	3.7	2.7
Atliq Grands	211.5M	52.6%	25.1%	3.1	2.7
Atliq Seasons	66.1M	44.6%	24.8%	2.3	1.8

Revenue By Each City's Property

City	Property_Name	Revenue	Occupancy Rate	Cancellation Rate	Avg Rating	Avg Stay Duration
Mumbai	Atliq Bay	51.9M	44.8%	25.4%	2.4	2.7
Mumbai	Atliq Blu	73.9M	66.3%	24.5%	4.3	2.8
Mumbai	Atliq City	88.0M	53.1%	25.1%	3.0	1.8
Mumbai	Atliq Exotica	212.4M	66.0%	24.3%	4.3	2.7
Mumbai	Atliq Grands	74.7M	53.7%	25.7%	3.1	2.8
Mumbai	Atliq Palace	101.5M	66.2%	24.4%	4.3	1.8



FEATURES OF THE DASHBOARD

- The following 5 visuals were provided:
 - **Revenue by platform** = Bar chart shows the revenue generated across various booking platforms
 - **Occupancy rate** = Column chart shows the percentage of rooms occupied by weekend and weekday
 - **Revenue by room type** = Tree map shows the distribution of revenue by room type
 - **Bookings by status** = Pie chart shows the distribution of number of bookings based on booking status
 - **KPI table** = A matrix visual (pivot table) showing the various KPIs across cities and hotels in each city



FEATURES OF THE DASHBOARD

- A bunch of card visuals were placed in the left to show the values of important KPIs
- The following filters were provided to slice and dice the data:
 - Month-year
 - City
 - Booking status
 - Booking platform
- The theme of the dashboard is based on the logo of the company
- The visuals are interactive in nature
- Tooltips pop-up when hovering over a visual for more information about the data point



BUSINESS OUTCOMES

- The following are some important business insights derived from the revenue dashboard:
 - Mumbai generates highest revenue and Delhi the least revenue during May to Jul 2022. Company need to focus on increasing the revenue in Delhi.
 - The occupancy rate is higher during weekends across all cities, months and booking platforms. Leverage this insight to increase revenue generated during weekends.
 - 70% of the bookings are checked out while 5% of booking don't show up across all cities and booking platforms which means 75% of bookings generate revenue for AtliQ hotels. Identify and analyze the reasons for cancellations and try to reduce them.



BUSINESS OUTCOMES

- The following are some important business insights derived from the revenue dashboard:
 - Avg rating varies between 3.4 to 3.8 across cities and avg stay duration is 2.4 for each booking. Compare it with the industry benchmark across cities and evaluate the performance.
 - Occupancy rate is highest at Delhi with 60+ % for all months though generates least revenue compared to other cities. Identify the reason for higher occupancy and use that to drive the revenue growth.



CONCLUSION

- A revenue dashboard was built for AtliQ hotels depicting its various KPIs visually
- Relevant filters along with tooltips and interactions was provided in the dashboard
- This dashboard can be used for both high-level and in-depth analysis of KPIs across various dimensions



THANK YOU !

