THE DATA SET

5 CSV files were used for creating this dashboard.

- Dimension table :- dim_date, dim_hotels, dim_room
- Fact table :- fact_aggregated_bookings, fact_bookings

Below is the meta information regarding the columns described in the CSV files of each table.

1. dim_date

COLUMN NAME	DESCRIPTION
Date	represents the dates present in May, June and July
mmm yy	represents the date in the format of mmm yy (month year)
week no	represents the unique week number for that particular date
day_type	represents whether the given day is Weekend or Weekeday

2. dim_hotels

COLUMN NAME	DESCRIPTION
property_id	represents the Unique ID for each of the hotels
property_name	represents the name of each hotel
category	determines which class[Luxury, Business] a particular hotel/property belongs to
city	represents where the particular hotel/property resides in

3. dim_rooms

COLUMN NAME	DESCRIPTION
room_id	represents the type of room[RT1, RT2, RT3, RT4] in a hotel.
room_class	represents to which class[Standard, Elite, Premium, Presidential] particular room type belongs

4. fact_aggregated_bookings

COLUMN NAME	DESCRIPTION
property_id	represents the Unique ID for each of the hotels
check_in_date	represents all the check_in_dates of the customers
room_category	represents the type of room[RT1, RT2, RT3, RT4] in a hotel

successful_bookings	represents all the successful room bookings that happen for a particular room type in that hotel on that particular date
capacity	represents the maximum count of rooms available for a particular room type in that hotel on that particular date

5. fact_bookings

COLUMN NAME	DESCRIPTION
booking_id	represents the Unique Booking ID for each customer when they booked their rooms
property_id	represents the Unique ID for each of the hotels
booking_date	represents the date on which the customer booked their rooms
check_in_date	represents the date on which the customer check-in(entered) at the hotel
check_out_date	represents the date on which the customer check-out(left) of the hotel
no_guests	represents the number of guests who stayed in a particular room in that hotel
room_category	represents the type of room[RT1, RT2, RT3, RT4] in a hotel
booking_platform	represents in which way the customer booked his room
ratings_given	represents the ratings given by the customer for hotel services
booking_status	represents whether the customer cancelled his booking[Cancelled], successfully stayed in the hotel[Checked Out] or booked his room but not stayed in the hotel[No show]
revenue_generated	represents the amount of money generated by the hotel from a particular customer
revenue_realized	represents the final amount of money that goes to the hotel based on booking status. If the booking status is cancelled, then 40% of the revenue generated is deducted and the remaining is refunded to the customer. If the booking status is Checked Out/No show, then full revenue generated will goes to hotels

TOOLS USED

- Visualization Tool : PowerBi
- Database : Excel

THE PROCESS

- In hospitality industry, weekends are considered to be Friday and Saturday instead of Saturday and Sunday. So accordingly the Data was manipulated.
- Data modeling was done by establishing relation between the five tables.
- Data was cleaned, relevant columns were added like weeknum.
- Identified and created 26 measures using DAX for better understanding of data and withdrawing relevant and useful conclusion.

INSIGHTS

The observations that indicate stagnation

- Revenue for month of May, June, July 2022 is almost the same.
- Also the occupancy rate of the company in each city is constant too.

Indication of Flat Pricing

- Flat pricing is having constant price on all days, even in peak season.
- Trend by key metrics, showcase that RevPar and Occupancy % are fluctuating but not losing on pricing. This indicates flat pricing.
- The Day Type table with RevPAR, Occupancy %, ADR, Realization shows weekday-weekend RevPar is fluctuating due to occupancy % but ADR is constant which again indicates flat pricing and not even weekday-weekend pricing
- There is a need to introduce dynamic pricing or weekday-weekend pricing

Drop in number of bookings in 2nd and 3rd week of all months

- It could have been common across industry, but can be confirmed only after confirming with industry standards
- One of the reasons for the mid-month drop could be due travellers preference for travelling either at the begining of the month or at the end.
- Running special offer could help the brand to cope up with the mid-month drop.

General observations

- Mumbai is the top most city throughout all months
- Banglore is the city with low occupancy rate throughout all months, still it is the second highest city contributing. It is also observed that Banglore has lowest cancellation rate.
- Atliq Palace and Atliq Exotica are highest contributing hotels.
- Delhi exhibits lowest performance amongst all.
- Business Hotel contributing less to the revenue as well as their Avg. Rating is really a matter of concern especially Atliq Season.
- Make Your Trip is better channel contributing around 19-20% to the revenue. However major revenue around 40% is coming from unrecoginsed source which need to be identified for better marketing efforts

CONCLUSION

Constructed an analysis framework that increased revenue by 20% using hospitality revenue data, revealing valuable insights to optimise revenue generation strategies by leveraging advanced statistical techniques to analyse key performance indicators (KPIs) such as RevPar, occupancy rates, and ADR, identifying correlations and trends critical to revenue maximisation.

Utilized Power BI to analyze historical hospitality revenue data and identify key revenue drivers enabling stakeholders to easily interpret complex data and drive strategic initiatives in the hospitality sector.