



ITC HOTELS REVENUE OPTIMIZATION

POWER BI PROJECT

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INTRODUCTION

ITC Hotels is an Indian hospitality company that operates and manages hotels. It has over 100 hotels and is India's third largest hotel chain. It has a franchise agreement to operate most of its hotels as part of The Luxury Collection of Marriott International. It is a subsidiary of ITC Limited.

ITC Hotels has four brands, each with a different class of hotel:

- ITC Hotels: Luxury hotels
- Welcome Hotel: Five-star hotels
- Fortune: Mid-market to upscale hotels
- Welcome Heritage: Heritage leisure hotel



To demonstrate the power of data visualization and analytics through the creation of a comprehensive Power BI dashboard, enabling better decision-making and showcasing the potential for data-driven insights in the hospitality industry.

MISSION

A hand in a blue suit sleeve holds a glowing orb. The orb is surrounded by a cluster of white business icons on a dark blue background. The icons include a magnifying glass, gears, a line graph, a bar chart, a group of people, a lightbulb, a target, and an eye. The background is a blurred image of a person in a blue suit.

To create an insightful and interactive dashboard using the ITC Hotel Dataset, highlighting key performance indicators and trends, while providing a milestone example of how data can drive actionable business insights and inform strategic decision.



Problem Statement

ITC Hotels is a luxury hotel chain that operates multiple properties with diverse room categories and varying occupancy rates. The company wants to gain deeper insights into its overall financial performance, customer booking behaviour, occupancy trends, and room category performance to optimize revenue generation, minimize cancellations, and enhance customer satisfaction. The goal of this project is to create an interactive, multi-page Power BI dashboard to provide stakeholders with real-time insights for decision-making.

1. Financial Overview and Revenue Performance



2.01bn

revenue_generated

50.44%

mom growth

13.85

wow growth

7.35K

REVPAR

₹14.92K

ADR

₹ 1.71...

revenue_realized

12.70K

ADR2

property_id

All

monthname

All

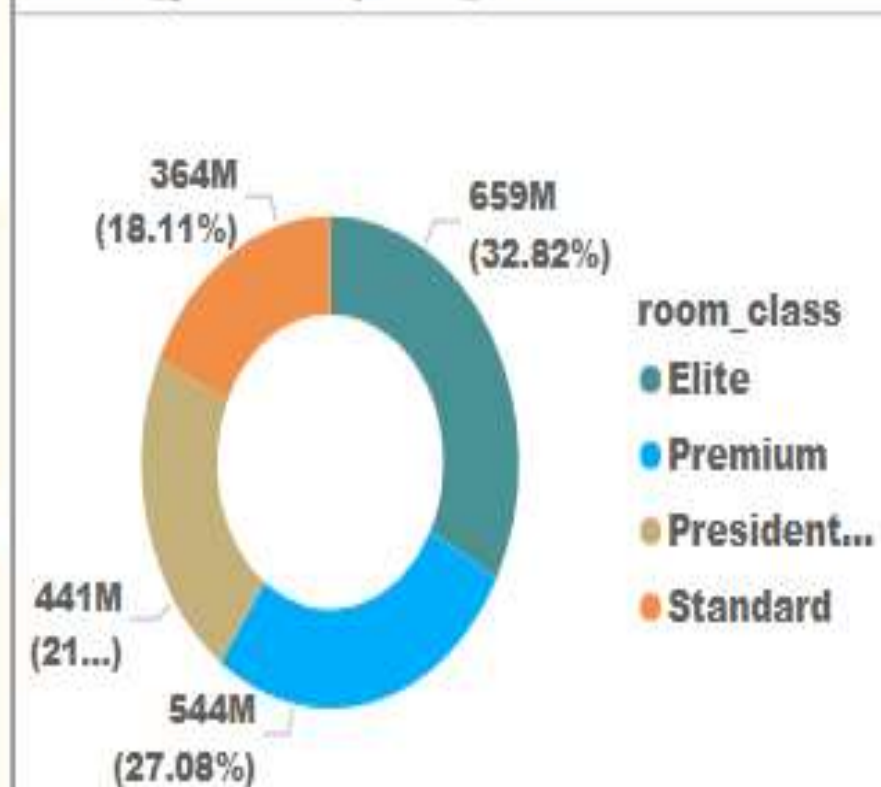
weeknum

All

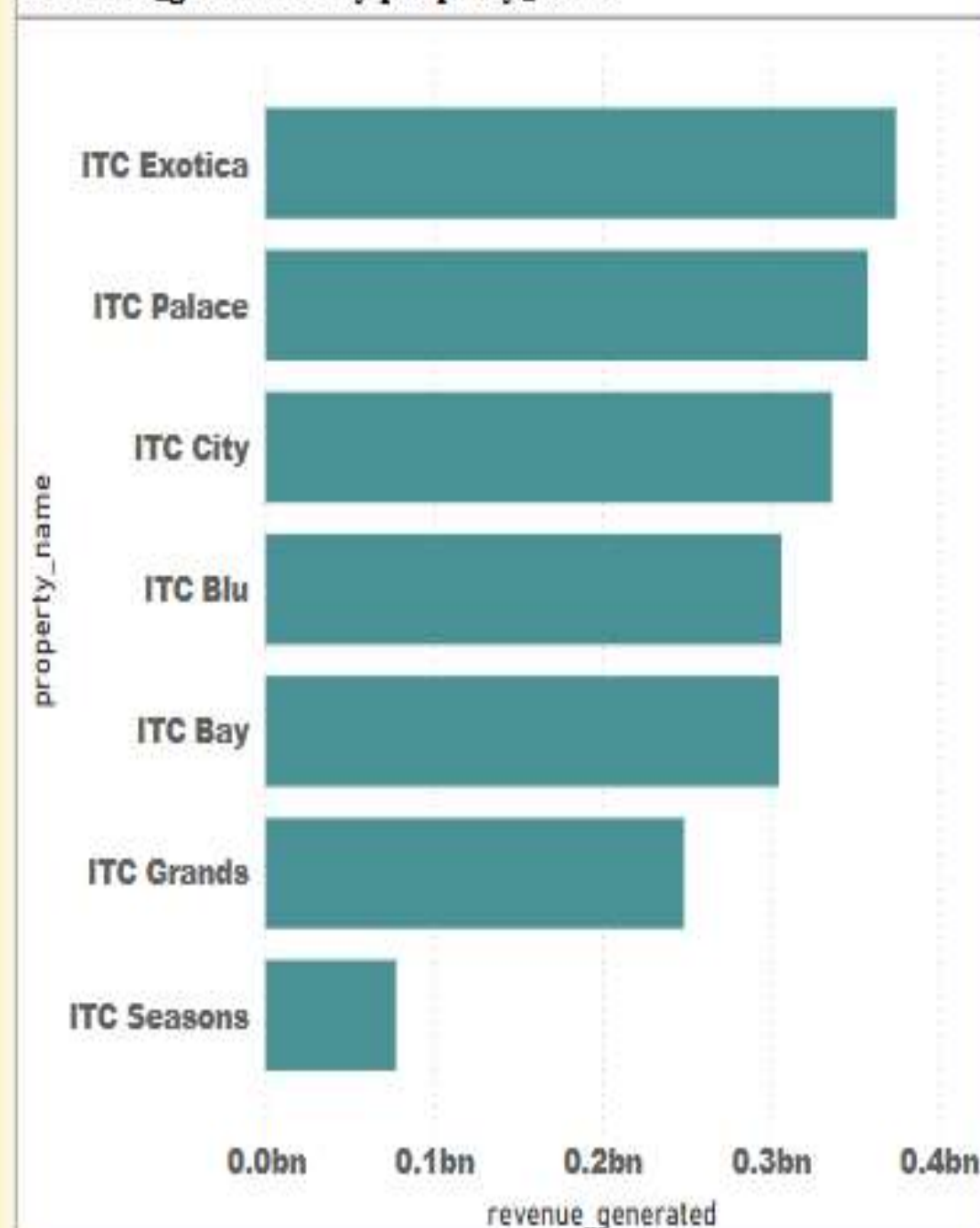
revenue_realized by category



revenue_generated by room_class



revenue_generated by property_name



Date	revenue_realized	running_total
31 July 2022	₹ 2,10,10,361	₹ 1,70,87,71,229
30 July 2022	₹ 2,09,81,473	₹ 1,68,77,60,868
29 July 2022	₹ 1,49,04,772	₹ 1,66,67,79,395
28 July 2022	₹ 1,46,79,184	₹ 1,65,18,74,623
27 July 2022	₹ 1,44,38,063	₹ 1,63,71,95,439
26 July 2022	₹ 1,46,11,219	₹ 1,62,27,57,376
25 July 2022	₹ 1,46,17,212	₹ 1,60,81,46,157
24 July 2022	₹ 2,08,10,402	₹ 1,59,35,28,945
23 July 2022	₹ 2,11,89,166	₹ 1,57,27,18,543
22 July 2022	₹ 1,48,85,108	₹ 1,55,15,29,377
Total	₹ 1,70,87,71,229	₹ 1,70,87,71,229

1. Financial Overview and Revenue Performance

Insights

Strong Revenue Performance:

- The total revenue is ₹1.71bn, showing a 50.4% MOM growth and 13.84% WOW growth, indicating a positive financial trajectory.
- Revenue distribution by room class shows Elite (₹659M) and Premium (₹544M) leading the revenue share.

Property-Wise Revenue Distribution:

- Properties like ITC Exotica and ITC Palace generate the highest revenue.
- Some properties have lower contributions, signaling potential underperformance or demand fluctuations.

Key Revenue Metrics:

- ADR (Average Daily Rate): 14.92K, indicating strong pricing strategies.
- RevPAR (Revenue Per Available Room): 7.35K, highlighting good occupancy and pricing efficiency.

Actionable Recommendations:

- Focus on revenue optimization strategies for lower-performing properties.
- Enhance dynamic pricing models to maximize revenue potential.
- Offer exclusive deals and promotions for Premium and Elite categories to maintain their high revenue contribution.

2. Occupancy and Capacity Analysis



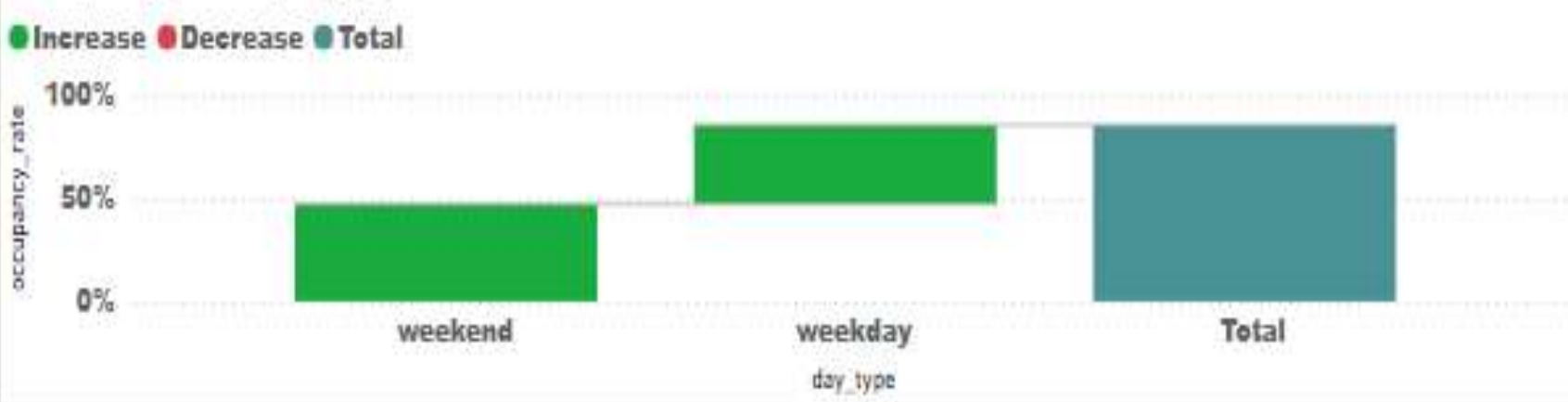
43.50%
occupancy_rate

1.00
revenue_generated and oc...

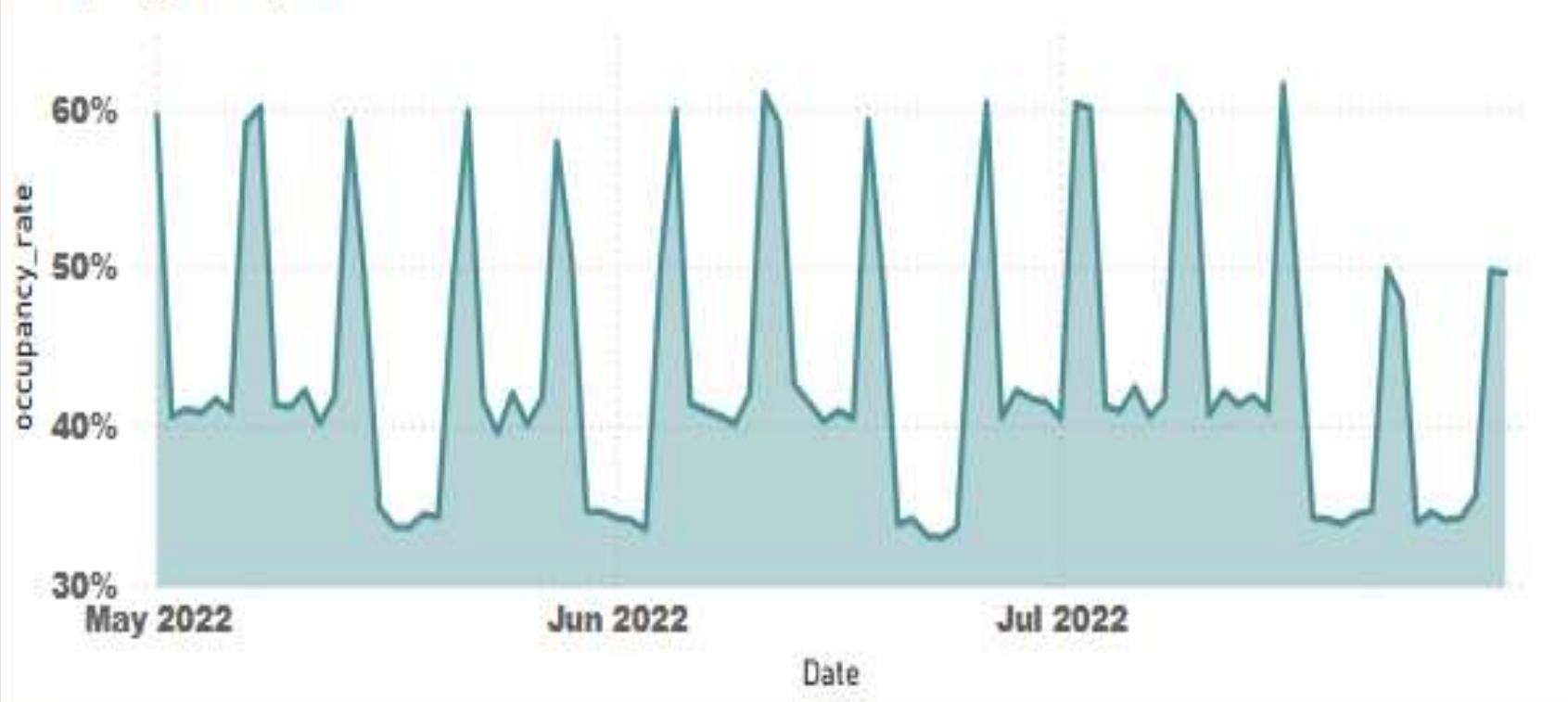
-0.12%
mom occupancy

0.13
wow occupancy

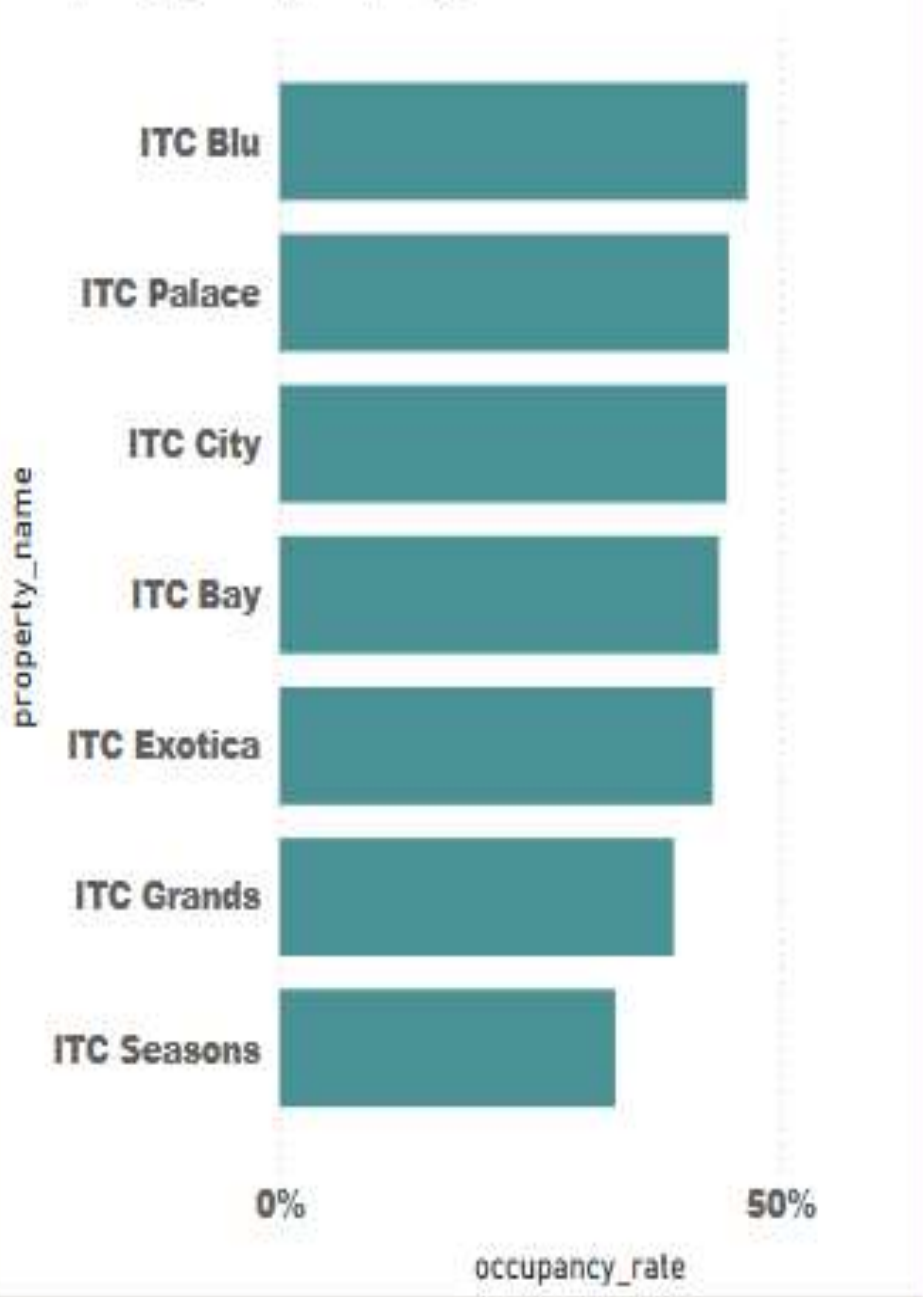
occupancy_rate by day_type



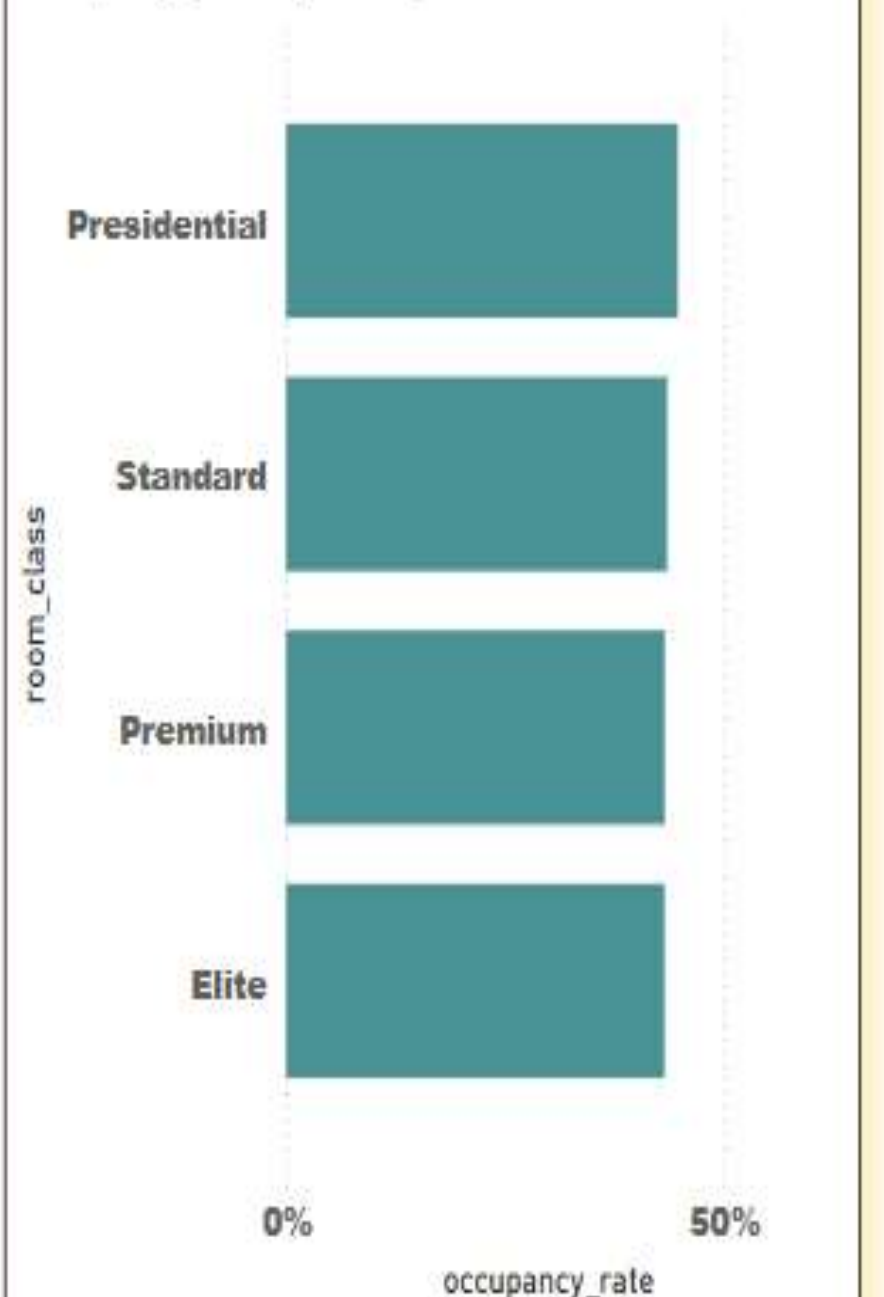
occupancy_rate by Date



occupancy_rate by property_name



occupancy_rate by room_class



2. Occupancy and Capacity Analysis

Insights

Moderate Occupancy Rate:

- The overall occupancy rate is 43.50%, indicating that there is room for improvement in increasing room utilization.
- The occupancy trend fluctuates significantly, showing peaks and dips, likely influenced by seasonality and events.

Occupancy by Day Type:

- Weekends (59.08%) have a significantly higher occupancy rate than weekdays (40.92%), suggesting that demand spikes during weekends.

Room Class Performance:

- Presidential and Standard rooms have Higher occupancy, while Premium and Elite categories perform better.

MOM & WOW Growth Analysis:

- MOM Occupancy Growth dropped by -0.12%, and WOW Occupancy Growth dropped by 0.13%, indicating a slight decline in occupancy trends.

Occupancy vs. Revenue Correlation:

- The 1.00 correlation between occupancy and RevPAR shows a strong dependency, meaning that increasing occupancy will significantly boost revenue.

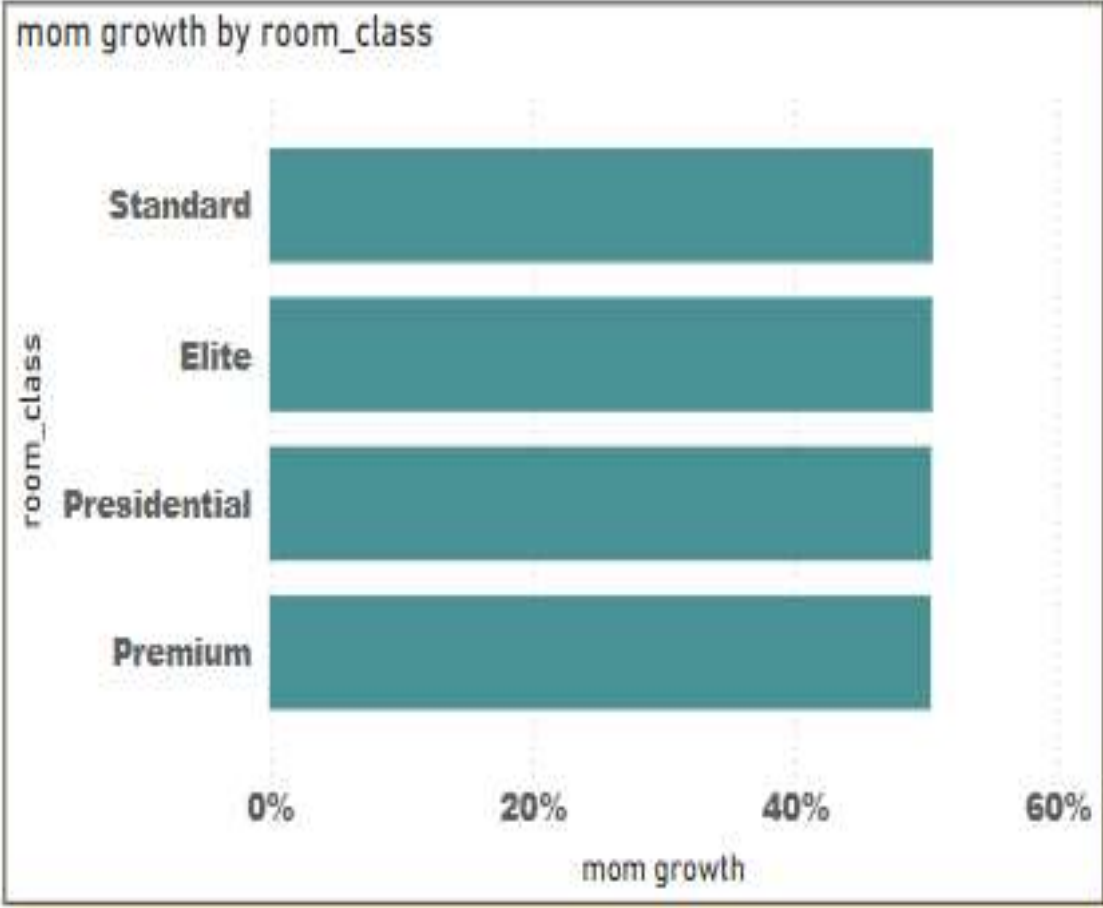
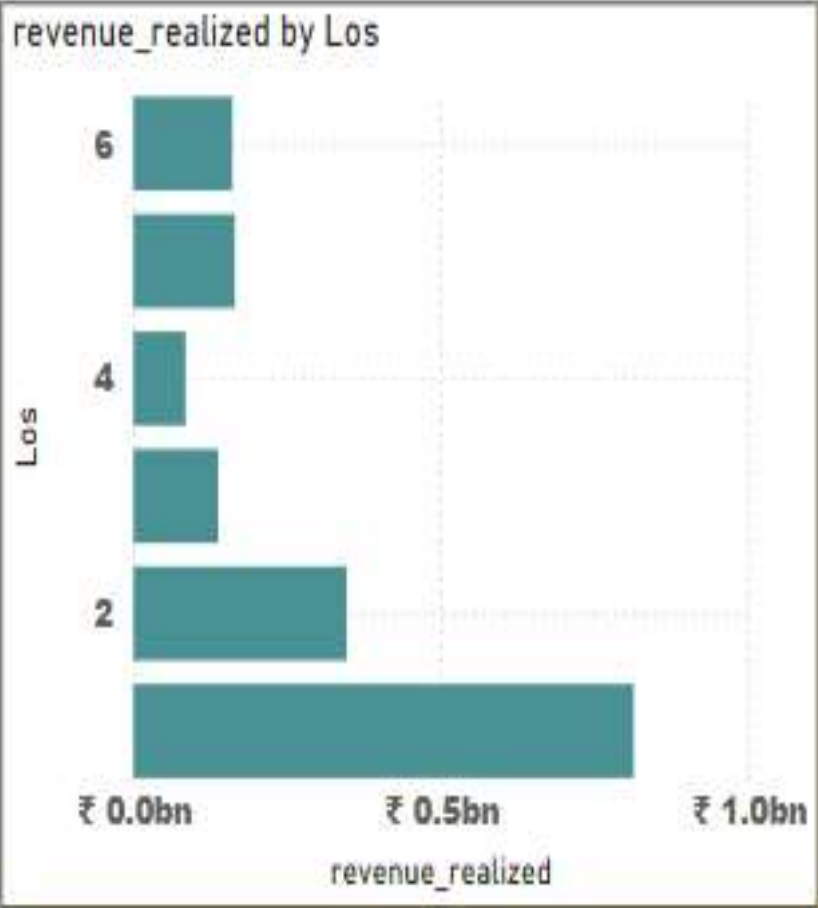
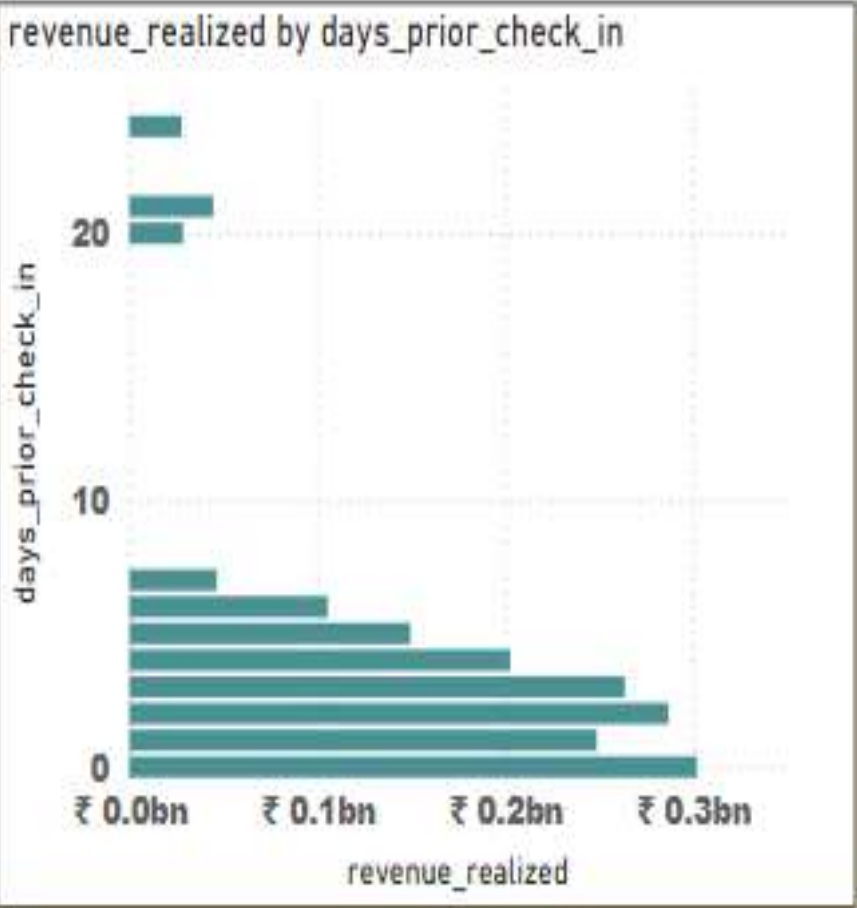
Actionable Recommendations:

- Enhance weekday booking strategies by introducing business-traveller-focused promotions.
- Use targeted marketing campaigns to boost occupancy for Presidential and Standard rooms.
- Develop long-term stay packages to stabilize occupancy rates.

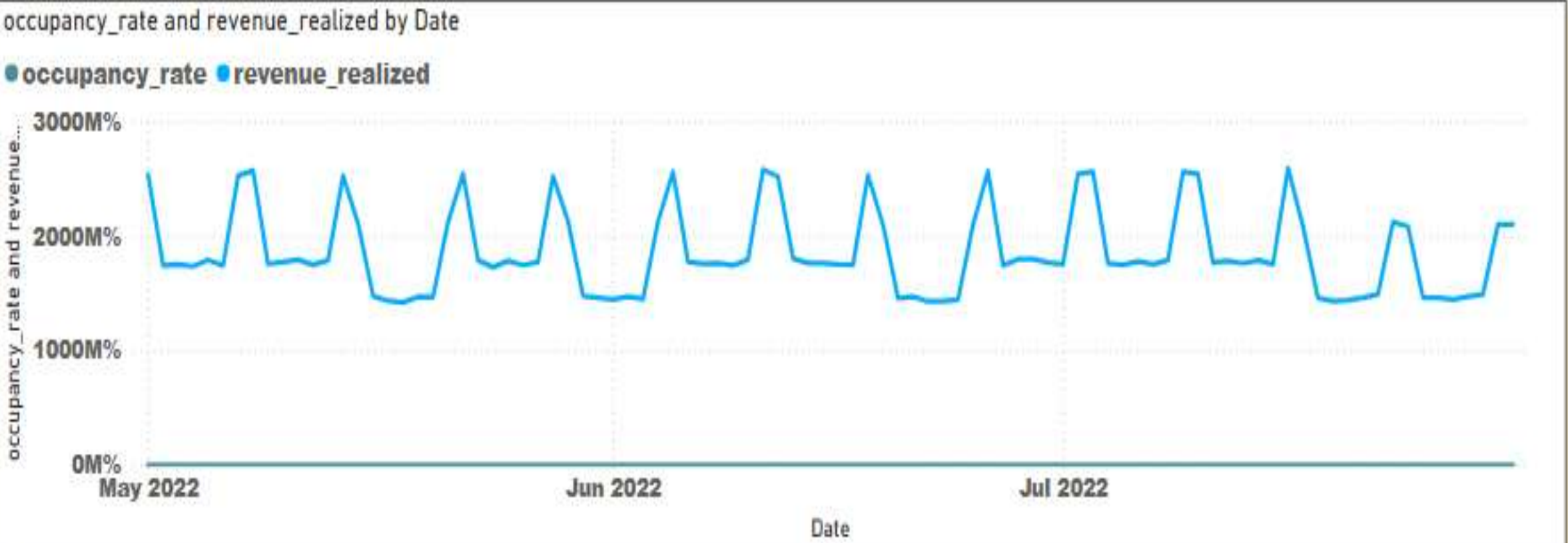
3. Room Category Performance and Booking Insights



Elite
TOP_ROOM_CATEGORY



2.37
ALOS



3.71
BOOKING_TO_CHECKIN

Parameter

occupancy_rate

revenue_realized

3. Room Category Performance and Booking Insights

Insights

Booking Behaviour & Trends:

- The Booking Lead Time is 3.71 days, meaning most bookings are made within a short window.
- ALOS (Average Length of Stay) is 2.37 days, suggesting a high proportion of short stays.

Revenue Contribution by Room Class:

- Elite & Premium rooms contribute the highest revenue, emphasizing the importance of maintaining their high occupancy levels.
- Revenue fluctuates seasonally, indicating demand-based changes.

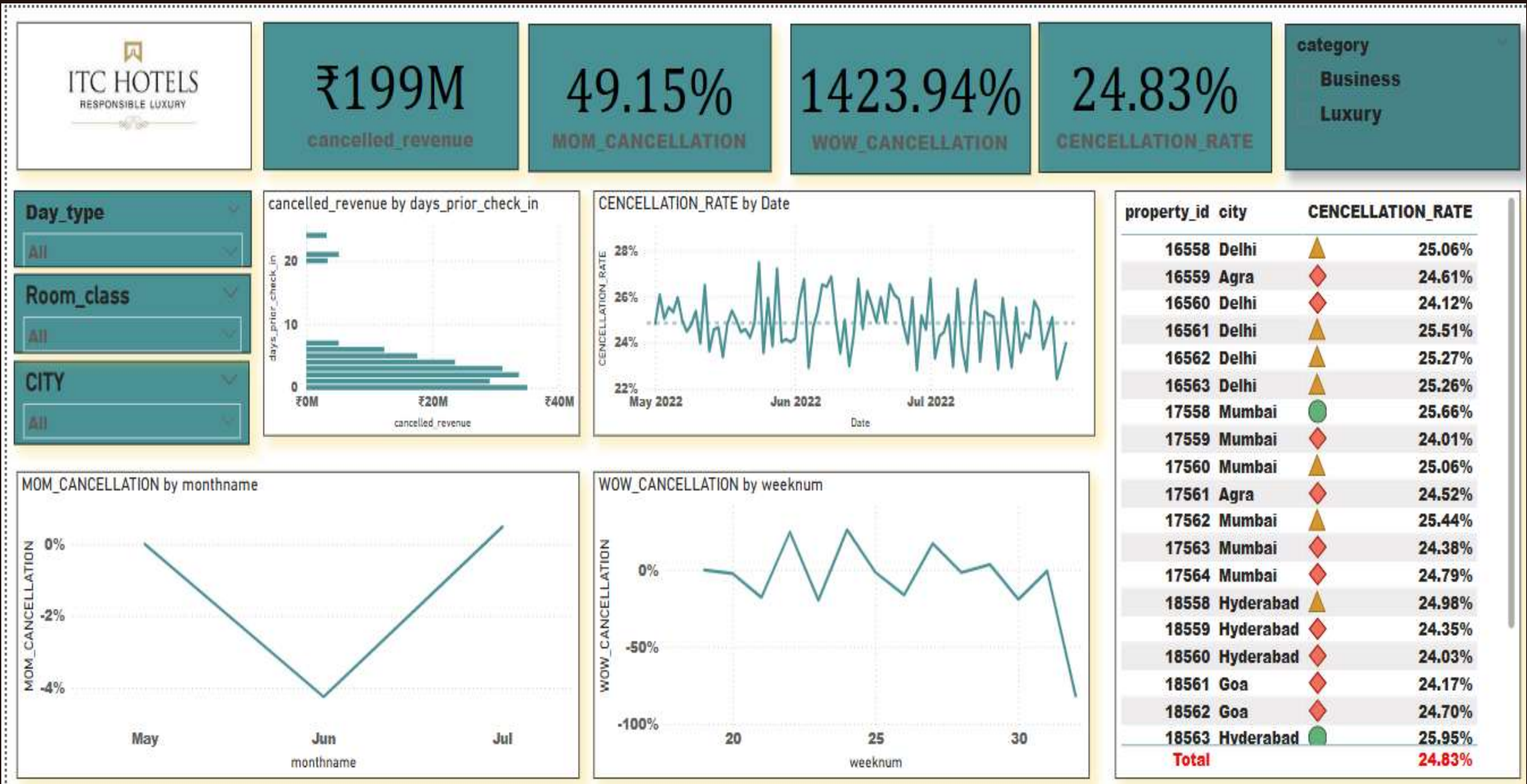
Length of Stay (LOS) by City & Property:

- Some cities have higher LOS, indicating regional trends affecting booking behaviour.

Actionable Recommendations:

- Target extended stays through attractive offers for long-term guests.
- Improve customer retention strategies to reduce last-minute cancellations.
- Use AI-based dynamic pricing to maximize revenue per booking window.

4. Cancellations and Lost Revenue Analysis



4. Cancellations and Lost Revenue Analysis

Insights

High Cancellation Rate:

- The overall cancellation rate is 24.83%, which is significant and could indicate issues such as pricing, customer preferences, or external market conditions.
- The cancellation trend fluctuates over time, suggesting the need for deeper seasonal or event-based analysis.

Cancellation by Day Type:

- Weekdays (50.56%) and Weekends (49.44%) have nearly equal cancellation rates, implying that cancellations are not strongly driven by weekdays or weekends.

Lost Revenue & Room Class Impact:

- The total lost revenue is ₹199M, which is a significant revenue leakage.
- Elite and Premium room categories contribute the most to lost revenue, indicating that high-value bookings are at higher risk of cancellations.

Month-over-Month (MOM) & Week-over-Week (WOW) Trends:

- MOM cancellation rate 49.15%, and WOW cancellation rate decreased by 1423.94%, indicating a slight improvement but still a concern.

Actionable Recommendations:

- Implement cancellation policies such as flexible rescheduling or loyalty incentives to retain customers.
- Conduct root-cause analysis for high-value room cancellations.
- Use predictive analytics to identify patterns and mitigate cancellations proactively.

CONCLUSION

This milestone project demonstrates how data visualization can transform raw data into meaningful insights. By analysing key metrics from the ITC Hotel dataset, the dashboard offers a clear view of operational performance, guest behaviour and revenue trends. The project not only enhances data interpretation skills but also showcases the potential of Power BI in driving informed decisions in the hospitality sector. This serves as a foundation for more advanced analytical initiatives in future projects.



THANK YOU

PRESENTED BY : Shubhangi Sapkale.