

Power BI Milestone

Project on



**Data Analysis Mentorship
Program – Cohort 4**

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Introduction

This document presents a comprehensive analysis of ITC Hotels' performance. We will explore the financial health, understand occupancy dynamics, analyze booking behaviors, and critically examine the trends and impact of cancellations as depicted in the dashboards.

The ultimate goal of this project is to:

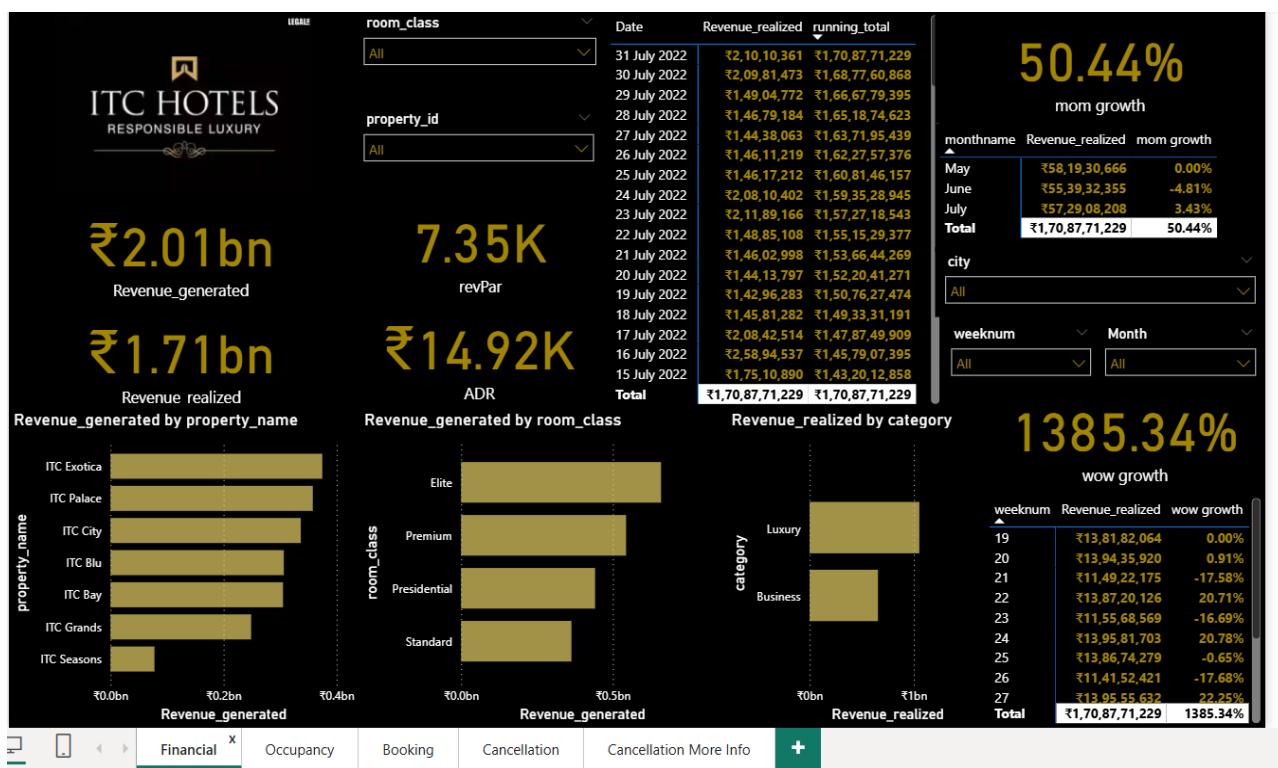
- Identify trends and anomalies in booking and cancellation behavior.
- Understand the financial impact of cancellations.
- Pinpoint high-risk platforms, properties, and time periods.
- Suggest data-driven actions to enhance booking reliability and reduce revenue leakage.

This comprehensive approach empowers the revenue management and operations teams at ITC Hotels to make informed decisions, refine strategies, and enhance overall business performance.

Financial Overview

🚀 Overall Revenue Performance

- **Revenue Generated:** ₹2.01 billion (₹201 crores)
- **Revenue Realized:** ₹1.71 billion (₹171 crores)
- This means ~85% of the generated revenue was realized.
- Significant gap between generated vs realized revenue suggests cancellations, no-shows, or partial refunds.



The dashboard clearly shows the total **Revenue Generated** (**₹2.01 billion**) and **Revenue Realized** (**₹1.71 billion**). The difference of ₹0.30 billion represents potential revenue lost, likely due to cancellations or modifications. This gap is a key area for improvement.



Revenue Growth Metrics

- **Month-over-Month (MoM) Growth:** 🔥 +50.44%
 - Very strong revenue growth across months.
- **Week-over-Week (WoW) Growth:** 💥 +1385.34%
 - Massive surge at the weekly level, although some weeks had negative growth (e.g., Week 21 and Week 23).

1 MoM Revenue Trend

Month Revenue Realized MoM Growth

May	₹58.19 Cr	0.00%
June	₹55.39 Cr	-4.81%
July	₹57.29 Cr	+3.43%

- 📉 Slight drop in June (-4.81%).
- 📈 Recovery in July (+3.43%).



Top Performing Properties

- Highest Revenue Generators:
 1. **ITC Exotica**
 2. **ITC Palace**
 3. **ITC City**
- These three properties together dominate a large chunk of total revenue.

Top Performing Room Categories

- **Elite** rooms generate the highest revenue.
- **Premium** and **Presidential** room classes follow next.
- **Standard** rooms contribute relatively lower revenue.

Hotel Category Revenue

- **Luxury Category** hotels bring significantly more revenue compared to **Business Category** hotels.

Key Metrics

- **Average Daily Rate (ADR)**: ₹14.92K
→ Higher ADR suggests premium pricing strategy or luxury clientele.
- **Revenue per Available Room (RevPAR)**: ₹7.35K
→ Good performance but RevPAR is lower than ADR, indicating either:
 - Not 100% occupancy.
 - Price drops in some periods.

Running Total (Revenue Realized)

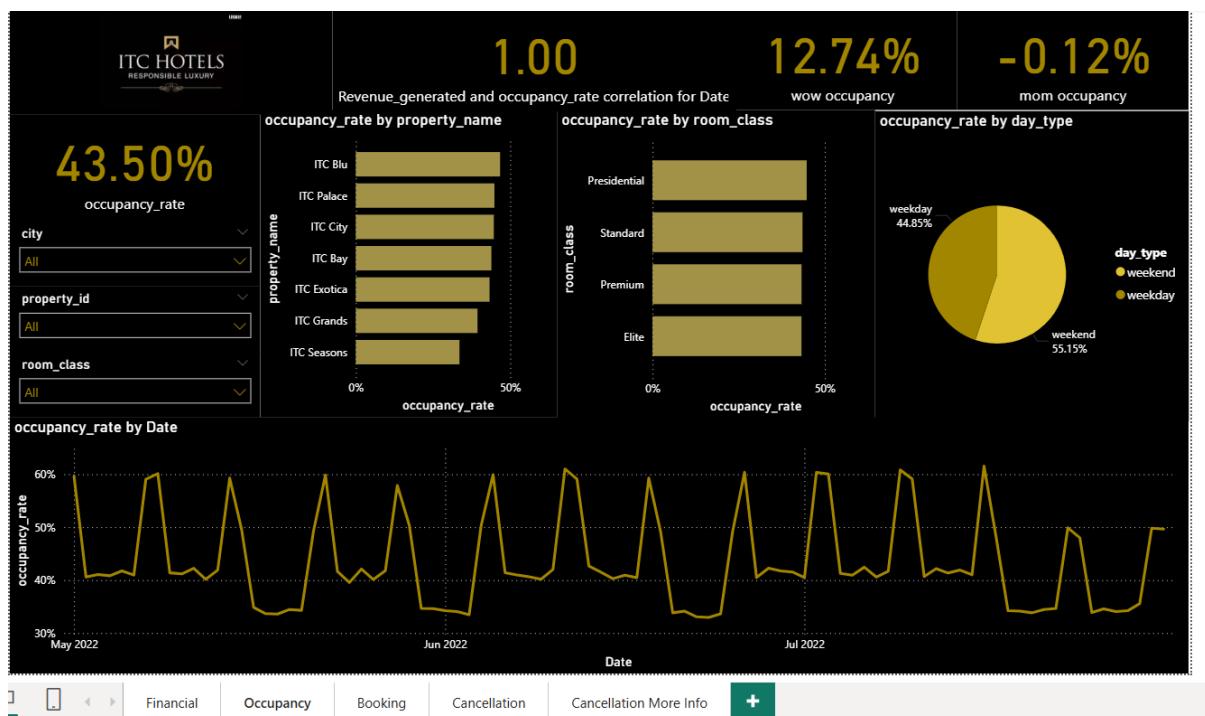
- Consistent increase in running total across dates — indicates steady booking flow despite some weekly fluctuations.

Occupancy Overview



Overall Occupancy Performance

- **Occupancy Rate: 43.50%**
 - Moderate — Less than 50% of the rooms are occupied on average.
 - There is substantial headroom for improvement to reach industry standard (~60%-70%).



Occupancy Growth Metrics

- **Week-over-Week (WoW) Occupancy Growth:** +12.74%
 - Strong weekly growth suggests short-term improvements in bookings.

- **Month-over-Month (MoM) Occupancy Growth:**  **-0.12%**

- Slight negative growth MoM — occupancy rates were fairly stagnant across months.



Revenue and Occupancy Relationship

- **Correlation between Revenue and Occupancy Rate: 1.00**
 - Perfect positive correlation — **Revenue moves directly with Occupancy.**
 - This means: increasing occupancy will almost certainly result in revenue increase.



Occupancy by Date (Trend Line)

- Clear **weekend spikes** visible in the trend line:
 - Regular increases around weekends (~60%) compared to weekdays (~30%-40%).
 - Suggests **weekend-driven demand** pattern.



Occupancy Split by Day Type

- **Weekend Occupancy: 55.15%**
- **Weekday Occupancy: 44.85%**
 - Higher demand on weekends, confirming the weekend trend shown in the line chart.
 - Business hotels typically expect higher weekday occupancy — but here leisure/weekend travel seems stronger.



Property-wise Occupancy Rate

- Top performing hotels in terms of occupancy:
 1. **ITC Blu**
 2. **ITC Palace**
 3. **ITC City**
 4. **ITC Bay**
- **ITC Exotica** and **ITC Grands** are slightly lower.
- **ITC Seasons** has the lowest occupancy among the listed properties.



Room Category-wise Occupancy Rate

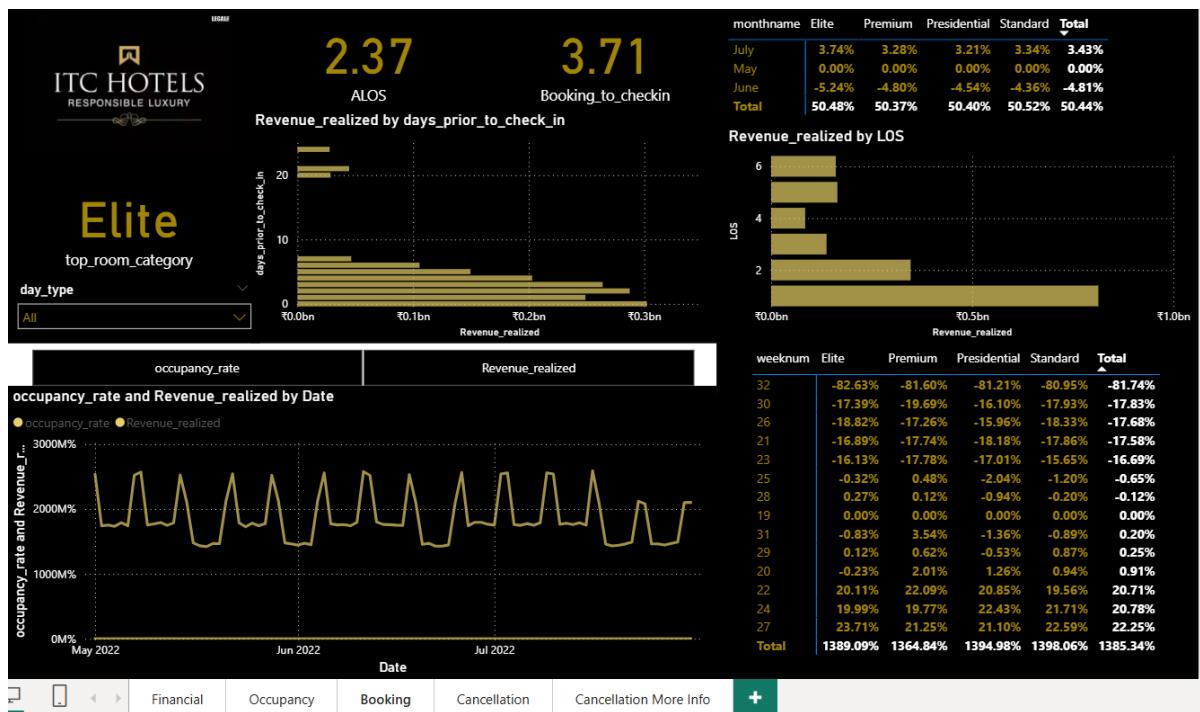
- **All room classes** (Presidential, Standard, Premium, Elite) show **similar occupancy rates**, close to ~43%-45%.
 - No extreme variance among room classes.
 - Suggests that **pricing or room category is not heavily affecting occupancy** — other factors like promotions or seasonality may be stronger drivers.

Booking Overview



Top-Performing Room Category

- **Elite** is the **top room category** in terms of overall performance.
- Stronger revenue contributions and occupancy compared to other categories.



ALOS (Average Length of Stay) and Booking Lead Time

- **ALOS (Average Length of Stay): 2.37 nights**
 - Short stays dominate — consistent with urban/business hotels.
- **Booking Lead Time (Average Days Prior to Check-in): 3.71 days**
 - Indicates **last-minute bookings** are common.

- Guests tend to book ~3-4 days before their stay.



Revenue Realized by Lead Time

- Majority of revenue is generated from bookings made **within 3–7 days before check-in**.
- Very few bookings come from early planners (>10 days prior).
 - Opportunity: **Incentivize early bookings** with discount campaigns.



Revenue Realized by Length of Stay (LOS)

- **2-night stays** contribute the highest revenue, followed by **3-night stays**.
- LOS ≥ 4 nights have **lower contribution**.
 - Suggests most guests prefer short getaways or business trips.



Revenue Growth – Week-over-Week by Room Category

- Overall **WoW Revenue Growth: +1385.34%** (Driven by sharp fluctuations)
- Recent weeks (week 32) show **massive decline across all room classes**:
 - Elite: **-82.63%**
 - Standard: **-80.95%**
 - Premium and Presidential also dropped ~-81%
- Previous weeks (week 27) show a **spike in performance**:

- Elite: **+23.71%**, Standard: **+22.52%**
- High volatility suggests potential **seasonality or promotional events** influencing bookings.

Occupancy Rate Over Time (Trend)

- Clear weekly **occupancy peaks (weekends)** continue (same pattern from previous dashboard).
- Dips are aligned with **mid-week or low-travel periods**.
- Strong cyclical pattern — useful for **inventory & staff planning**.

MoM Growth by Room Category

- Modest growth in **July** across all room types (~3.2%–3.7%)
- **Significant dip in June** (~-5% across all room types)
- Suggests **post-July recovery** or peak-season effect.

Summary Insights

Aspect	Key Insight
 Top Room Category	Elite — best-performing in both revenue and booking patterns
 ALOS	Short stays dominate (avg. 2.37 nights)
 Lead Time	Last-minute bookings (avg. 3.71 days)
 Revenue Source	Highest from bookings made within 3–7 days before check-in
 Week 32 Alert	Sharp drop (~-81%) in revenue across all categories — urgent investigation needed
 Booking Pattern Cycles	Strong weekly cycle — weekend demand spikes; consistent pattern

Cancellation Overview



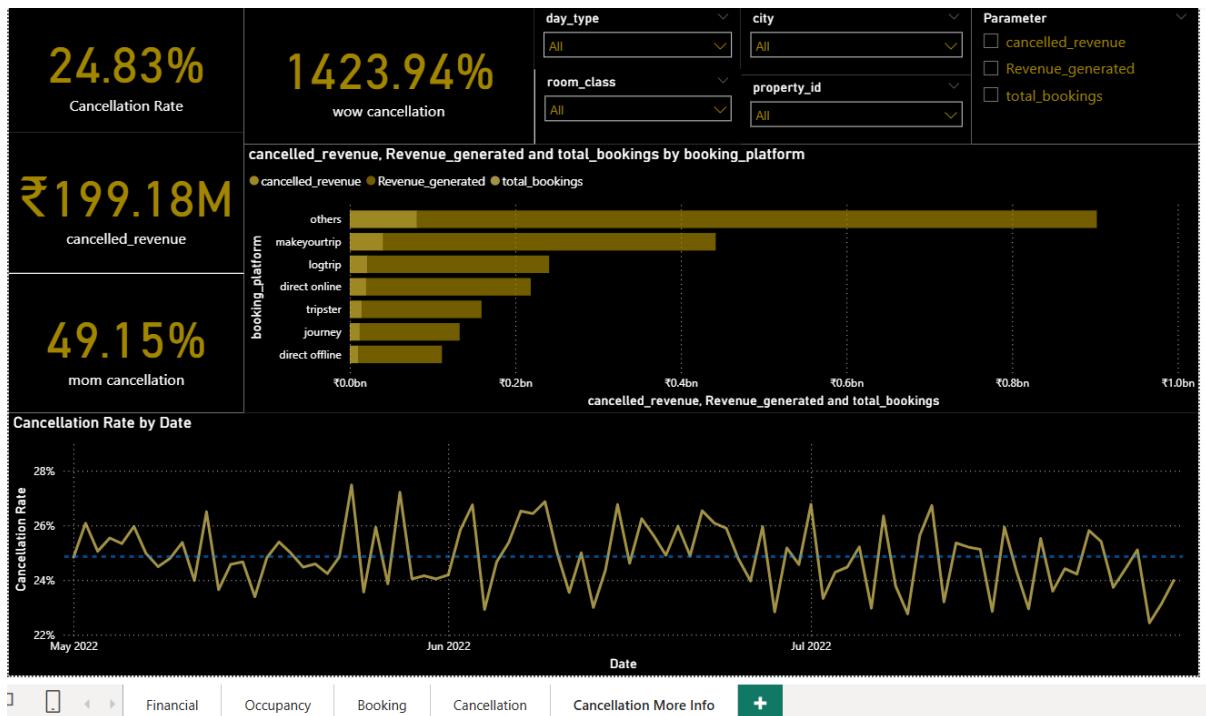
Key Cancellation Insights (Overall)

- **Overall Cancellation Rate** stands at **24.83%**, which is considerably high and may require targeted actions to reduce booking losses.
- Total **cancelled revenue** amounts to **₹199.18M**, a significant financial impact.



City & Property-Based Cancellations

- **Pune (property_id 19560)** exhibits the **highest cancellation rate** at **26.38%**.
- Most cities and properties show cancellation rates clustering around 24-25%, indicating a systemic issue rather than isolated incidents.



Time-Based Cancellation Trends

- **Month-over-Month (MoM) cancellation** dipped in **June** (approx. -4.5%) but spiked back up in **July**, leading to a high **MoM rate of 49.15%** overall.
- **Week-over-Week (WoW) cancellation** fluctuates dramatically, peaking at an alarming **1423.94% increase** in a recent week.
- **Daily Cancellation Rate trend** oscillates between **22% to 28%**, indicating inconsistent guest retention across days. There is a slight upward trend over time.



Platform-Wise Cancellation & Revenue Insights

- The “**others**” booking platform has the **highest cancelled revenue and total bookings**, suggesting it contributes disproportionately to losses.
- **Makeyourtrip, logtrip, and direct online** channels also report high cancellation rates and revenue loss.
- **Direct offline bookings** exhibit relatively lower cancellation volumes—potentially a more stable source of bookings.



Impact by Booking Parameters

- Though not broken down explicitly in the screenshot, filters indicate that cancellation rates could be explored further by **day_type, room_class, and category** for deeper segmentation.



Recommendations

- **Maximize High-Value LOS (Length of Stay):** Most revenue is realized from 2–3 day stays. Design promotional packages around this duration to increase revenue per booking.
- **Encourage Early Bookings:** Higher revenue is captured from bookings made well in advance. Offer early-bird discounts or loyalty benefits to promote advance bookings.
- **Focus on Elite Room Category:** The *Elite* room category contributes significantly to revenue. Promote this category through upselling strategies and personalized packages.
- **Platform Optimization:** Booking platforms under "Others" generate the highest revenue but may have high cancellations. Evaluate commission structures and negotiation opportunities to protect margins.
- **Address Weekend Volatility:** Occupancy dips and spikes consistently. Introduce flexible pricing or event-based promotions to stabilize weekend occupancy rates.
- **Improve Week 26–32 Performance:** Occupancy rates significantly declined in these weeks. Analyze seasonality, events, and market conditions to drive corrective campaigns.
- **Utilize Underperforming Cities:** Cities like Goa and Agra show average occupancy but lower cancellation rates. Focus marketing here to drive consistent traffic.
- **Short Lead Time Optimization:** Many bookings occur close to the check-in date (avg. 3.71 days). Offer incentives for longer lead times to reduce last-minute pressure and cancellations.
- **Monitor Booking Platform Dependency:** Heavy reliance on a few platforms (e.g., "Others", "Logtrip") can be risky.

Diversify and strengthen direct booking channels with exclusive perks.

- **Track Week-by-Week Trends:** Use weekly patterns to proactively forecast demand, plan staffing, and optimize pricing dynamically.
- **High Cancellation Rate (24.83%):** This is a significant revenue leakage (~₹199.18M). Introduce stricter cancellation policies for short lead-time bookings or high-risk users.
- **Target High-Risk Cities & Properties:** Pune and Hyderabad show higher cancellation rates. Investigate underlying causes (pricing, customer profile, service quality).
- **Platform Accountability:** Platforms like "Others" and "Logtrip" are major revenue sources *and* cancellation contributors. Consider tighter SLAs or penalties for cancellations.
- **Policy Refinement:** Introduce tiered cancellation penalties depending on booking window and stay duration to discourage last-minute cancellations.

Conclusion

This project offers a comprehensive analysis of ITC Hotels' performance across four critical dimensions: **Financials, Occupancy, Bookings, and Cancellations**. Through detailed dashboards and metrics, it highlights both opportunities and areas requiring focused intervention.

Key observations reveal that while **high-end room categories like Elite contribute significantly to revenue**, they also face **volatile occupancy patterns and inconsistent booking trends**. Despite strong average booking-to-check-in lead times, cancellation rates remain high at **24.83%**, representing a substantial loss of nearly **₹199.18M in revenue**. Certain booking platforms and cities contribute disproportionately to these cancellations, demanding targeted policy and operational refinements.

On the positive side, granular data on revenue realization by LOS and lead time provides valuable levers for **rate optimization and promotional planning**. Furthermore, weekly and monthly trend visualizations uncover patterns that can support **more agile forecasting and resource planning**.

In summary, the project not only uncovers critical performance drivers but also lays a strong foundation for **data-informed decision-making**, enabling ITC Hotels to enhance profitability, guest satisfaction, and operational efficiency in a competitive hospitality landscape.