OPTIMIZING REVENUE LEAKAGE & PROFITABILITY IN THE HOSPITALITY SECTOR

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Objective

To identify operational inefficiencies, revenue leakages, and demand trends within the hotel group using Power BI and booking-level data, and to recommend actionable strategies that improve revenue realization and profitability.

Brief Summary

This project analyzes over 135,000 hotel bookings across multiple cities, room categories, and platforms. Through KPIs like Total Revenue, Occupancy Rate, Cancellation Rate, and RevPAR, we uncovered issues like high cancellations, underutilized capacity, and uneven platform performance. The final report proposes 5 strategic recommendations backed by data visuals, with estimated financial gains of ₹240–₹260 million annually and a payback period of under 7 days.

Key KPIs

Total Revenue	Rooms Sold	ADR
₹1.71bn	135K	₹ 12.7K

Occupancy Rate (%)	Booking Conversion Rate (%)
57.9%	70.1%

RevPAR	Avg Length of Stay
₹7.35K	2

Cancellation Rate (%)	Revenue Lost to Cancellations
24.83%	₹497.96M

Reduce Revenue Leakage from Cancellations

Cancellation Rate (%)

24.83%

Revenue Lost to Cancellations

₹497.96M

Insight:
Nearly **1 in 4 bookings** get **cancelled** ➜ **₹497M lost**
Some platforms like **makeyourtrip** have **high cancellation volumes.**

Recommendation:
- Introducing **stricter cancellation policies** and **incentivizing prepayments** directly targets the biggest source of revenue leakage.

- Reducing cancellations even by **5% recovers ~₹85M** — a significant gain without needing to increase customer volume or pricing.

- It's a low-cost, policy-based fix that protects future revenue.

Boost Occupancy in Underperforming Hotels & Cities

Occupancy Rate (%)

57.9%

Total Revenue by month

📊 **Insight:**

- Overall occupancy is only **57.9%**
- Some properties in high-performing cities **(like Delhi) underperform**
- Over **40% of rooms go unused —** especially midweek

💼 **Recommendation:**

- **Offer discounts/packages on low-demand dates** via direct channels

- By focusing on **city-level campaigns and tailored packages** (e.g., midweek bundles, event tie-ins), underutilized capacity can be converted into bookings.

- A **5% occupancy increase adds ~6.7K room sales**, worth over ₹100M in new revenue.

- It's a better **use of existing infrastructure** than **building new capacity.**

Revamp Booking Platform Strategy

📊 **Insight:**
- **Most revenue** comes from **high-cancellation platforms**
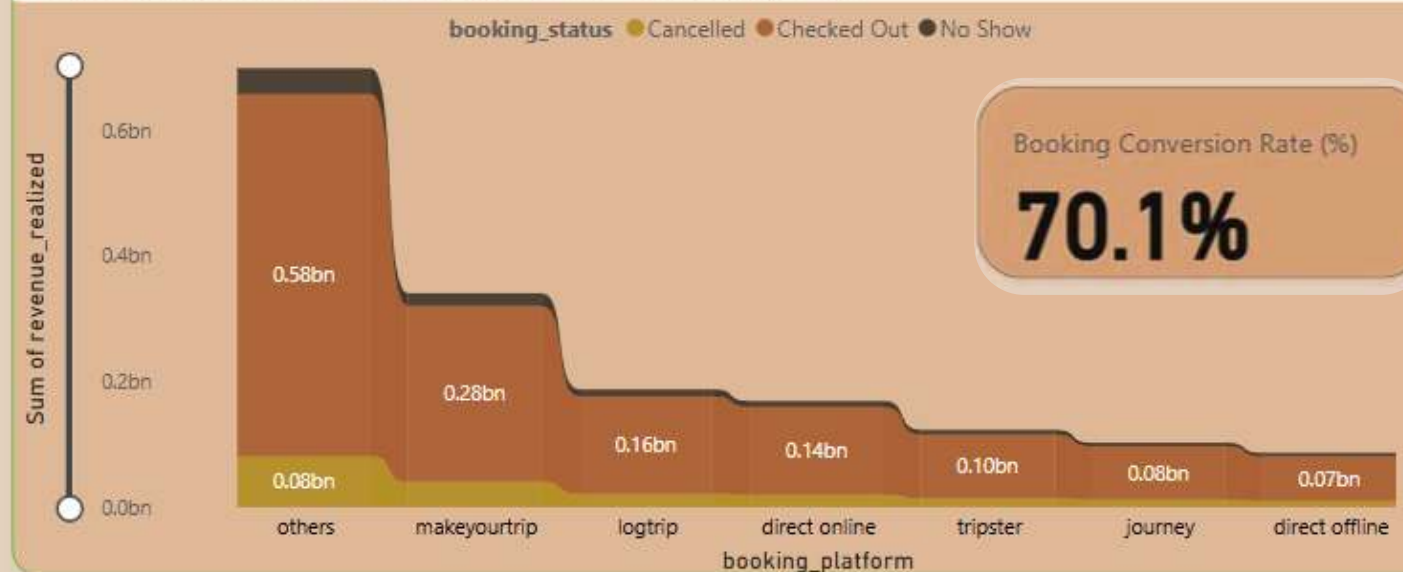- **Direct bookings have lower cancellations**, but **low volume**

✅**Recommendation:**
- **Incentivize direct bookings** via cashback or loyalty
- **Negotiate lower commissions** with high-volume, **high-cancellation platforms**

💼 **Justification:**
- **Shifting booking volume** toward direct channels increases revenue retention (less commission loss), reduces cancellation rates, and gives hotels greater control over guest relationships.
- Even a **10% shift to direct bookings can result in ₹30M+** in retained earnings, and it **helps build brand loyalty and repeat stays.**

Sum of revenue_realized by booking_platform and booking_status

booking_status ● Cancelled ● Checked Out ● No Show

Booking Conversion Rate (%)
70.1%

0.58bn | 0.28bn | 0.16bn | 0.14bn | 0.10bn | 0.08bn | 0.07bn
0.08bn

others | makeyourtrip | logtrip | direct online | tripster | journey | direct offline

booking_platform

Implement Day-Type Based Dynamic Pricing

📊 **Insight:**
- **Weekday sales dominate quantity,** but **weekends see spike in Premium/Elite** room sales

✅**Recommendation:**
- **Increase price differential** between high-demand room types (Elite) and low (Presidential)
- Apply **day-type-based dynamic pricing** (Premium rooms cheaper midweek)
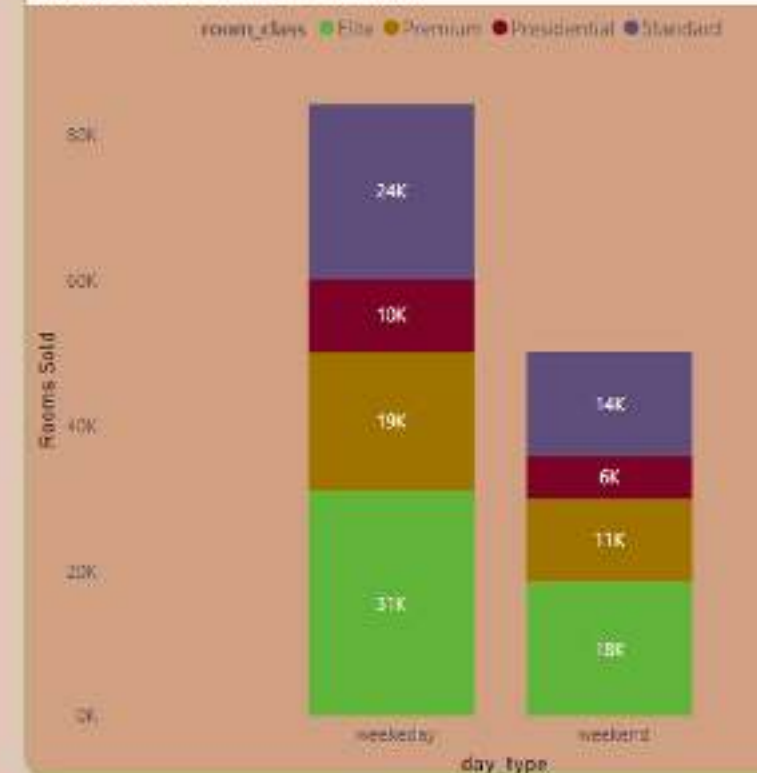
💼 **Justification:**
Dynamic pricing lets you charge more when demand is high, and offer targeted discounts to drive traffic when demand is low.
This **maximizes Revenue per Available Room (RevPAR) without compromising occupancy.**
Airlines and top hotel chains like Marriott & Taj already use this — it's a proven method to optimize both price and volume.

Rooms Sold: Weekday vs Weekend

room_class ● Elite ● Premium ● Presidential ● Standard

weekday: 24K, 10K, 19K, 31K
weekend: 14K, 6K, 11K, 18K

day_type

Room Type Demand Skews Toward Mid-Tier Preferences
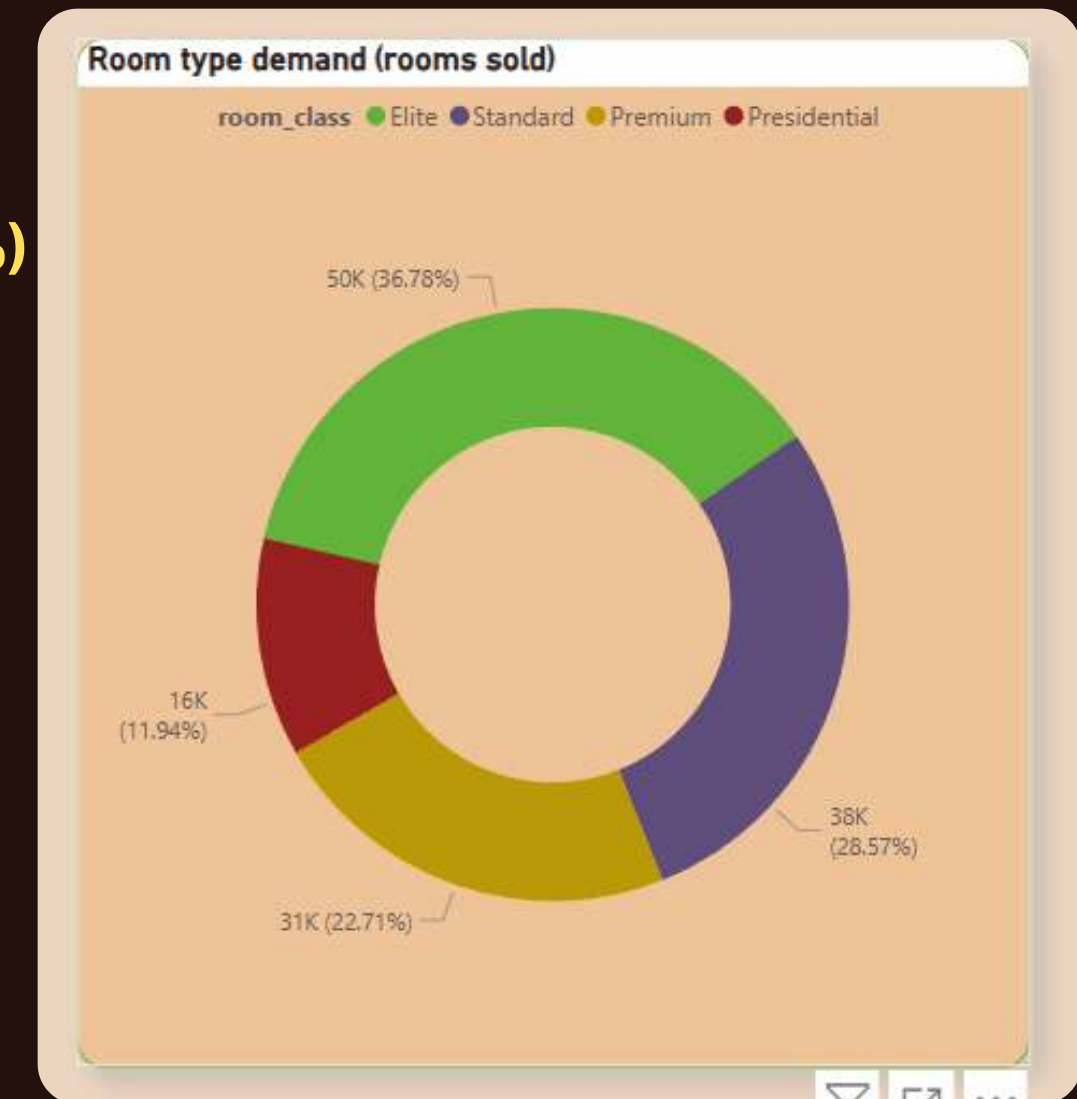
Room 01
$ 9,34,56

Room 02
$ 6,34,56

$ 12,034,56
Room 03

📊 **Insight (from Donut Chart)**

- **Elite rooms** account for **the highest share** (36.8%) — a surprising leader
- **Standard and Premium rooms** together make up just over half **(51.3%)**
- **Presidential rooms** severely **underperform** (only ~12%) despite highest pricing
- Suggests that **customers are price-sensitive** but open to upgraded comfort (Elite)

💡 Recommendation

- **Reposition Presidential rooms** with bundled experiences (e.g., spa, dining, airport pickup)
- Offer **limited-time upgrades from Premium to Elite** for a small fee
- **Promote Elite rooms more actively** — they show strong traction and may benefit from pricing tweaks
- Test weekday discounts on underperforming Premium/Presidential rooms

Room type demand (rooms sold)

room_class ● Elite ● Standard ● Premium ● Presidential

50K (36.78%)

16K (11.94%)

38K (28.57%)

31K (22.71%)

Empower Property-Level Performance Strategy

📊 **Insight:**

- Some **hotels in top-performing cities lag** behind others
- **Inconsistent performance** indicates **operational or service issues**

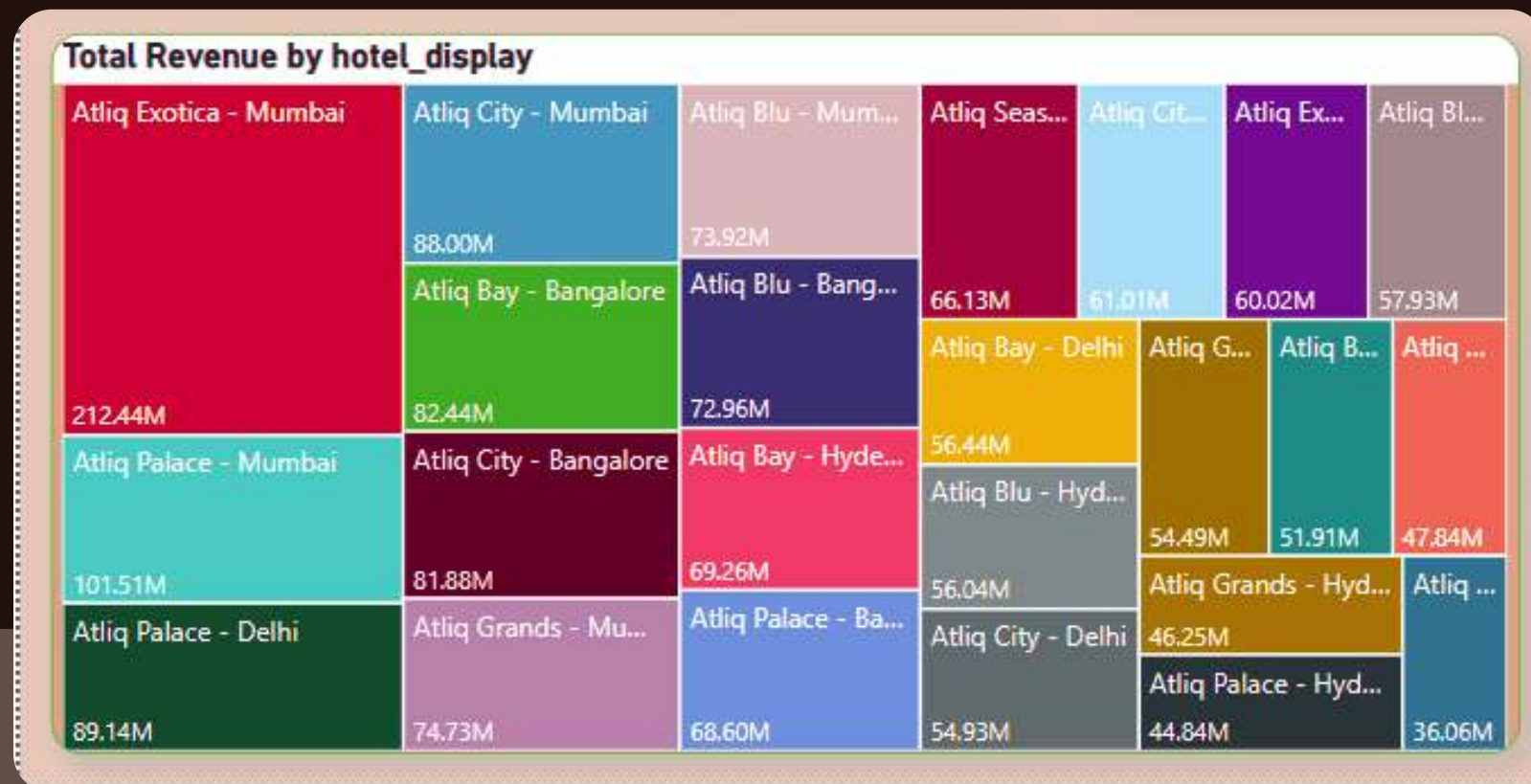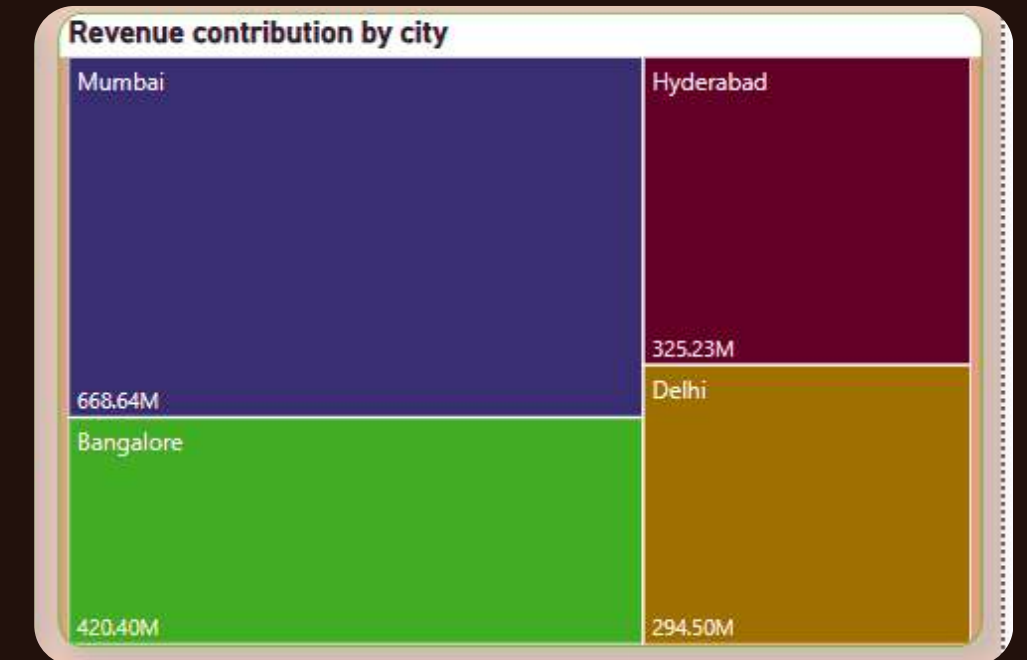✅ **Recommendation:**

- Run **performance audits** for **lagging properties in top cities**

- Push **customized training** or **bundled services** to improve outcomes

💼 **Justification:**

Building hotel-level dashboards and **assigning KPIs** like occupancy, conversion rate, and revenue per guest **creates accountability at the ground level.**

Properties can receive **tailored training or marketing support** based on performance data, improving efficiency and outcomes.

This decentralizes performance management and **builds a data-driven culture** within the hotel chain.

Revenue contribution by city

Mumbai — 668.64M
Hyderabad — 325.23M
Delhi — 294.50M
Bangalore — 420.40M

Total Revenue by hotel_display

Atliq Exotica - Mumbai — 212.44M
Atliq City - Mumbai — 88.00M
Atliq Blu - Mum... — 73.92M
Atliq Seas... — 66.13M
Atliq Cit... — 61.01M
Atliq Ex... — 60.02M
Atliq Bl... — 57.93M
Atliq Bay - Bangalore — 82.44M
Atliq Blu - Bang... — 72.96M
Atliq Bay - Delhi — 56.44M
Atliq G... — 54.49M
Atliq B... — 51.91M
Atliq ... — 47.84M
Atliq Palace - Mumbai — 101.51M
Atliq City - Bangalore — 81.88M
Atliq Bay - Hyde... — 69.26M
Atliq Blu - Hyd... — 56.04M
Atliq Grands - Hyd... — 46.25M
Atliq ... — 44.84M
Atliq Palace - Delhi — 89.14M
Atliq Grands - Mu... — 74.73M
Atliq Palace - Ba... — 68.60M
Atliq City - Delhi — 54.93M
Atliq Palace - Hyd... — 36.06M

¥ ROI & PAYBACK

🧠 RECOMMENDATIONS BEING CONSIDERED

1. Stricter cancellation policies + prepayment enforcement
2. Midweek/weekday-specific offers to boost occupancy
3. Platform mix optimization (shift from OTAs to direct)
4. Dynamic pricing based on room class and day type
5. Upselling/bundling for underperforming luxury rooms

Breakdown of Implementation Cost

Item	Estimated Cost (₹)
Policy integration, tech upgrade	₹5,00,000
Staff training, incentive realignment	₹3,50,000
CRM tools & email automation	₹2,00,000
Dashboard setup and analysis tools	₹1,50,000
Total	₹12,00,000 (₹1.2M)

Breakdown of Estimated Annual Revenue Gain

Revenue Uplift Area	Assumption/Justification	Estimated Gain (₹)
Reduced Cancellations	Recover 10% of current loss (₹497.96M × 10%) via prepayment & policy tightening	₹50M
Increased Occupancy (via weekday offers)	5% more occupancy = ~6,750 rooms × ₹12,700 ADR	₹85M – ₹120M
Platform Mix Optimization	Shift to direct bookings reduces OTA commission & boosts revenue	₹30M
Upselling Premium/Presidential Rooms	Bundling & repositioning strategies lead to marginal price lift & higher conversion	₹15M – ₹20M
Dynamic Pricing Based on Day Type & Demand	Better alignment of price with demand (weekday/weekend) & room class	₹25M – ₹30M
TOTAL ESTIMATED GAIN		₹240M – ₹270M

ROI & Payback Analysis Table

Component	Value
Estimated Annual Revenue Gain	₹240M – ₹270M
Implementation Cost (one-time)	₹1.2M
ROI	199x – 224x
Payback Time	1.5 to 2 weeks

🔮 Scenario Analysis

Scenario	Assumptions	Revenue Impact
Best Case	10% fewer cancellations, 8% more occupancy, major shift to direct bookings	₹400M+ gain
Most Likely	5% fewer cancellations, 5% occupancy boost, moderate success in upselling	₹240M – ₹270M gain
Worst Case	2% fewer cancellations, minimal platform shift, limited uptake of new policies	₹50M – ₹80M gain

Conclusion

This project uncovered key operational gaps and revenue leakage in the hospitality business using real booking data from 135K+ transactions.

Through Power BI dashboards and DAX-driven KPIs, we identified:
- A high cancellation rate (24.83%) leading to ~₹498M revenue loss
- An occupancy rate of 57.9%, signaling room for better capacity utilization
- Underperformance of premium offerings and uneven hotel-wise revenue contributions

Based on these insights, we proposed 5 strategic, low-cost recommendations focused on:
- Reducing cancellations
- Increasing occupancy
- Optimizing platform mix
- Leveraging dynamic pricing
- Enhancing room-type positioning and upselling

The projected annual revenue gain is ₹240M–₹270M, with a payback period of just 1.5–2 weeks — even in a conservative case, the initiative is profitable within a month.

THANK YOU

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