

# Hospitality Revenue Intelligence: An Analytical Case Study of AtliQ Grands

## 1. Project Identity & Technical Stack

A rigorous professional project identity is fundamental to establishing analytical authority. By clearly defining the domain and technical boundaries, an architect ensures that stakeholders understand the context of the data and the sophistication of the tools used to derive insights, thereby bridging the gap between raw information and strategic intelligence.

**Project Title:** Hospitality Revenue Intelligence: An Analytical Case Study of AtliQ Grands **Subtitle:** A Business Intelligence Case Study in Hospitality Analytics **Domain:** Hospitality **Type of Analysis:** Revenue Intelligence & Performance Benchmarking **Tool Stack:** Power BI | Power Query | DAX

This structured identity provides the necessary framework for a deep dive into the underlying metrics that drive revenue performance across a high-tier hotel portfolio.

## 2. Problem Framing: The Analytical Gap

The transition from a descriptive historical summary to a formal analytical problem frame is a hallmark of senior-level reporting. In professional BI, data must be interrogated through a strategic lens to solve specific business inefficiencies. Without this framing, analysis remains a passive observation rather than an active tool for identifying the drivers of success or failure.

The core analytical gap addressed in this case study is the challenge of interpreting complex, multi-dimensional hospitality data to evaluate performance objectively. This analysis explores how structured data modeling can move beyond basic booking counts to identify where revenue realization fails and where pricing strategies lack efficiency. By synthesizing disparate transactional records, the study isolates why certain properties outperform others and determines if high occupancy is being achieved at the expense of profit margins. The primary focus is on the analytical reasoning required to diagnose revenue variance and operational bottlenecks.

Addressing this gap requires a set of precise, intent-based objectives to guide the development of a functional intelligence model.

## 3. Analytical Objectives

Establishing clear, goal-oriented objectives is essential for maintaining the focus of a Business Intelligence project. These goals serve as the blueprint for the data

architecture, ensuring that every calculated measure and visualization serves a direct strategic purpose.

To bridge the identified gaps, the following objectives were executed:

- **Define** domain-specific performance metrics (RevPAR, ADR, Occupancy) to standardize evaluation across the portfolio.
- **Build** a relational data model capable of processing multi-source datasets into a single source of truth.
- **Compare** performance across diverse properties, cities, and booking platforms to uncover regional and operational disparities.
- **Identify** patterns in occupancy cycles and revenue realization to highlight margin leakage.
- **Translate** complex data findings into a structured hierarchy of insights that facilitate executive-level decision-making.

These objectives directly informed the composition of the data landscape and the subsequent modeling requirements.

#### **4. Data Landscape**

The validity of any analytical finding rests on the rigor of its data landscape. Documenting the "ground truth"—including source types and entities—provides the transparency necessary to ensure the reliability and reproducibility of the analysis.

The analysis is built upon a combination of transactional and aggregated structured datasets. This includes booking-level transactions (detailing status, revenue generated, and revenue realized), room capacity records, and property metadata (city, hotel category). The scope also incorporates room classifications and specific date attributes. This dataset covers a multi-property, multi-city portfolio over a defined 13-week analysis window (Weeks 19-31).

This diverse landscape was meticulously prepared to transition from raw data into a high-performance relational model.

#### **5. Analytical Design & Modeling**

The transition from raw, flat data to a relational architecture is a critical architectural prerequisite. It allows for the complex slicing and dicing required to understand the nuances of hospitality performance.

##### **5.1 Data Preparation**

The data underwent extensive cleaning and transformation within Power Query. This involved normalizing columns and unpivoting data where necessary to ensure the

structure was optimized for relational modeling. Date attributes were aligned with hospitality reporting cycles, and a specific "Day Type" classification was implemented to distinguish between Weekdays and Weekends (defined as Friday and Saturday). These preparation steps were essential to create the standardized dimension tables required for the Star Schema.

## 5.2 The Data Model

The analysis utilizes a Star Schema architecture to facilitate efficient KPI aggregation and flexible reporting. The model centers on Fact tables (Bookings and Aggregated Capacity) linked to Dimension tables (Hotels, Rooms, and Dates). This specific logic was chosen to ensure that complex measures—such as RevPAR and Realization %—remain accurate regardless of whether the user is viewing data at the city level, property level, or through temporal slices.

This architectural backbone enables the calculation of a sophisticated KPI framework.

## 6. KPI Framework: The Analytical Backbone

In the hospitality domain, generic business totals are insufficient for measuring true performance. Domain-specific metrics, calculated via DAX, provide the precision required to evaluate pricing power and asset utilization.

The following KPIs represent the core drivers of this analysis:

- **Revenue:** Total realized revenue after adjustments, standing at **₹1.69 Billion**.
- **RevPAR (Revenue Per Available Room):** The primary measure of revenue efficiency relative to capacity, calculated at **₹7,337**.
- **Occupancy %:** The utilization of available room inventory, averaging **57.8%**.
- **ADR (Average Daily Rate):** The average price realized per room sold, standing at **₹12,696**.
- **Realization %:** The ratio of successful check-ins to total bookings, currently at **70.1%**.

These metrics serve as the primary indicators within the analytical scope, allowing for a deep investigation into the portfolio's operational health.

## 7. Analytical Scope & Capability

The analytical output is framed as a strategic capability rather than a static visual. This capability empowers users to interrogate the data through multiple dimensions to identify high-performing assets and areas of revenue leakage.

The model enables users to evaluate:

- Cross-city and property-level performance comparisons to isolate geographic variables.
- Temporal demand patterns, including Week-on-Week (WoW) fluctuations (e.g., the observed **0.2%** shifts in RevPAR and Occupancy).
- Revenue variation by room category, revealing a significant split between **Luxury (61.62%)** and **Business (38.38%)** segments.
- Realization and efficiency differences across booking platforms, including **Logtrip, Journey, and MakeYourTrip**.

By leveraging these capabilities, several critical insights were derived from the data trends.

## 8. Key Insights: Methodology & Interpretation

The "Observation → Interpretation" framework ensures that data is translated into strategic meaning. A senior architect does not merely report numbers; they explain the architectural or strategic significance of those findings.

- **Property-Level Performance Variance:** Revenue varies from approximately **₹44M to ₹117M** across properties. Interpretation: Success is not dictated solely by location. The fact that high variance exists within the same city indicates that property-specific pricing strategies and operational execution are the primary drivers of revenue.
- **The Occupancy-Pricing Paradox:** The data shows that high occupancy does not consistently lead to high RevPAR. Interpretation: Chasing 100% occupancy without a corresponding optimization of ADR often leads to "leaving money on the table." Several properties are over-leveraging volume at the expense of pricing efficiency.
- **Revenue Realization & Channel Leakage:** With a realization rate of **70.1%**, nearly 30% of potential revenue is lost. Interpretation: High cancellation rates on platforms like **Logtrip** and **Journey** suggest that platform-specific policies or customer behaviors are creating margin leakage. This requires a shift from booking-volume focus to realization-quality focus.
- **Weekend Demand Dominance:** Occupancy peaks at **62.6%** on weekends compared to **55.8%** on weekdays. Interpretation: The portfolio is heavily reliant on leisure demand. The underutilization of mid-week capacity indicates a lack of corporate or mid-week specific demand-shaping initiatives.
- **Luxury Category Contribution:** The **Luxury segment** accounts for **61.62%** of total revenue. Interpretation: As the primary revenue engine, the Luxury category should be the first candidate for the implementation of dynamic pricing models,

as even small improvements in Luxury ADR will have a disproportionate impact on the bottom line.

## 9. Strategic Implications & Recommendations

An analyst serves as a strategic guide, providing evidence-based directions for improvement. The following recommendations are derived from the observed data patterns.

- Adopt **RevPAR-centric benchmarking** as the primary performance indicator to move beyond deceptive revenue totals.
- Implement **dynamic pricing strategies**, particularly in the Luxury segment, to improve ADR during high-demand periods without sacrificing current occupancy levels.
- Conduct a **platform audit** for channels like MakeYourTrip and Logtrip to identify why realization rates are suppressed and to mitigate channel-specific leakage.
- Develop **mid-week demand-shaping initiatives**, such as targeted corporate pricing or promotional packages, to bridge the utilization gap between weekdays and weekends.

These recommendations are subject to the specific boundaries and context of the available data.

## 10. Constraints & Assumptions

Acknowledging the limitations of an analysis is vital for establishing credibility. Defining these boundaries ensures that the findings are interpreted with the appropriate level of reliability.

- **Historical Window:** Analysis is strictly confined to the provided window of Weeks 19–31.
- **External Variables:** The model does not account for external factors such as seasonality, local events, or competitor pricing data.
- **Market Share Metrics:** The analysis lacks market share and competitor benchmarking metrics (e.g., MPI, ARI), limiting the view to internal performance only.
- **Data Integrity:** Specific "abnormal" data points were excluded during the modeling phase to maintain the integrity of the broader trends.
- **Nature of Data:** The project utilizes sample data to demonstrate analytical thinking and methodology.

## **11. Closing Note: Portfolio Positioning**

This project is intended as a portfolio case study to demonstrate analytical thinking, KPI design, data modeling, and insight communication using real-world structured data. The emphasis is on methodology and reasoning rather than operational outcomes.