PROPOSAL FOR OFFICE OF BUSINESS / DATA ANALYST IN HOSPITALITY INDUSTRY

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1. Introduction

In everyday life, data is being generated and available in an organization, from transactional data in a traditional database, telemetry monitoring data from services that we use, to signals that we get from different areas like social media.

For example, today's retail businesses, hospitality industries, among many, collect and store massive amounts of data that track the items we browsed and purchased, the pages we've visit on their site, the aisles we purchase products from, the rooms and meals we book, our spending habits, and much more.

Hospitality industries should be able to use their vast amounts of data and information in such a way that impacts their business, like:

i. tracking inventory
ii. identifying purchase habits of their customers
iii. detecting booking trends and patterns
iv. recommending different purchases of rooms, entertainments
v. determining price optimizations
vi. identifying and stopping fraud in their organisation

Business/Data Analysts might be looking for daily/monthly sale patterns, common data segments that they want to examine include day-over-day, week-over-week, and month-over-month so that they can compare how sales have been to where sales were in the same week last year, for example. Key to unlocking these data is being able to tell progressive stories with them.

In today's highly competitive and fast-paced business world, crafting reports that tell these stories is what helps business leaders act on the data. Business decision makers depend on accurate narratives to drive better business decisions. The faster a business can make precise decisions, the more competitive they will be and the better advantage they will have. Without these stories, it is difficult to understand what the massive data in organisations storages are useful for.

The underlying challenge that businesses face today is understanding and using their data in such a way that impacts their business and ultimately their development. Business/Data Analysts need to be able to look at the data and facilitate trusted business decisions. Then, they have the ability to look at metrics and clearly understand the meaning behind those metrics.

All the above might seem daunting to business owners, but it is a task that can be accomplished. The first step is to partner with data experts, such as Business/Data Analyst, to help get the data and develop story that you need to help drive decision making process.

Your journey of telling a story with data also ties into building that data culture within your organization. Business/Data analysis exists to help overcome these challenges and pin points, ultimately assisting businesses in finding insights and uncovering hidden value in treasure trove of data through storytelling.

2. Components of Data Analysis

The main components of Business/Data Analysis are divided into the following categories:

i. Descriptive analytics

Descriptive analytics help to answer questions about what has happened based on historical data.

ii. Diagnostic analytics

Diagnostic analytics help to answer questions about why events happened.

This leads into identifying anomalies in the data; collection of data related to these anomalies and use statistical techniques to discover relationships and trends that explain these anomalies.

iii. Predictive analytics

Predictive analytics help to answer questions about what will happen in the future. Predictive analytics utilises real-time and or past data to make predictions based on probabilities. It can also be used to infer missing data or establish a predicted future trend.

iv. Prescriptive analytics

Prescriptive analytics help to answer questions about which actions should be taken to achieve a goal, target (KPI)

By correctly analysing past decisions and events, organisations can estimate likelihood of different outcomes.

v. Cognitive analytics

Cognitive analytics help to learn what might happen if circumstances change and determine how best to handle these situations.

3. Who is a Business/Data Analyst

A Data Analyst enables businesses to maximize the value of their data assets through visualization and reporting tools such as Microsoft Power BI, or Tableau.

A Business Analyst has similar functions as the Data Analyst. The main difference between the two positions is what they do with data. A Business Analyst is closer to the business and specialises in the interpretation of data that comes from the visualization produced by Data Analyst.

Sometimes, the roles of Data Analyst and Business Analyst can be the responsibilities of a single person.

4. The Office of a Business/Data Analyst

The Office of a Business/Data Analyst is functionally better equipped with a Data Collector, a Data Entry personal and Database Administrator. These roles function to monitor and manage the overall health of a database and the hardware housing the data.

A Database Administrator manages the overall security of the data, granting and restricting user access and privileges to the data as determine by business needs and requirements.

5. Responsibilities

A Data Analyst is responsible for profiling, cleaning, and transforming data. Also responsible for designing and building scalable and effective data models, enabling, and implementing the advanced analytics capabilities into reports for analysis. A Data Analyst is task with implementing and configuring proper security procedures, in agreement with stakeholder requirements, to ensure the safekeeping of all analytic tools assets and their data.

Six basic steps of a Data Analyst are: asking questions; getting data; investigating the data; transforming/preparing the data; analysing the data and finally presenting the results to the decision-makers of the organisation.

6. Recommendations

In the light of the above, a big organisation needs the services of a Business/Data Analyst to fly high and excel in this competitive world.

As a follow-up to the presentation on this subject on 09/08/2023, a team of two to three experts can work with the organisation to set up a robust Office of Business/Data Analyst within six months to be able to conduct business analysis to assess business problems/opportunities and document the business requirements in such a way that technological solutions can be determined. This can also promote business improvements through alternative service delivery approaches.

7. Sample Of Business Data Analysis

Some pertinent data information Business/Data Analyst shall require include among other:

for a hotel industry:

i. Booking ID – unique identifier of each booking
ii. Number of adults
iii. Number of children
iv. Number of weekend nights
v. Date, Time of arrival
vi. Reservation for special room
vii. Reservation for parking spaces

And for restaurant hospitality:

i. Review of website
ii. Number of Reviews
iii. Status of customers – Local/international
iv. Open Status – Open/close
v. Types of Food
vi. Types of Drinks
vii. Sources of Supply

All of these depend largely on the modus operandi of the business, and these can be achieved by the Team visit to the organisation.

In demonstration of the above, using hotel industry as an example, we designed the following samples of dashboards from some raw dataset.

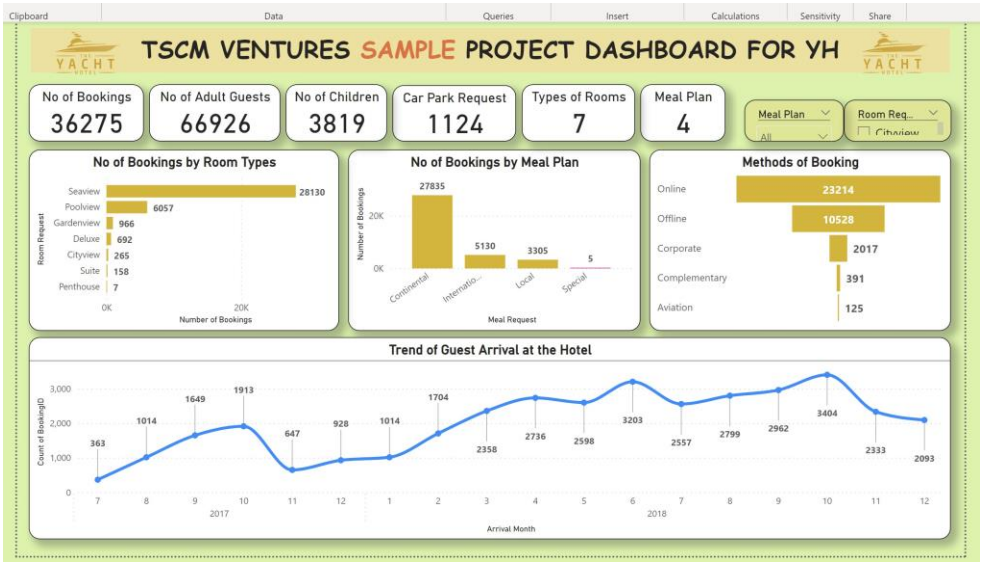

Figure 1: A sample of general dynamic dashboard for hotel industry.

Figure 1 is one of many **dynamic dashboards** which can be generated from supplied data to tell useful stories of how to correct, improve, propel the industry to the next higher levels.

It can be seen from an 18-month database acquired that number of guests arriving in the hotel was low in the first half of each year and peaked in the month of October before it started nose diving towards the December. This could be due to some factors which will be discovered with full analysis of the company's data.

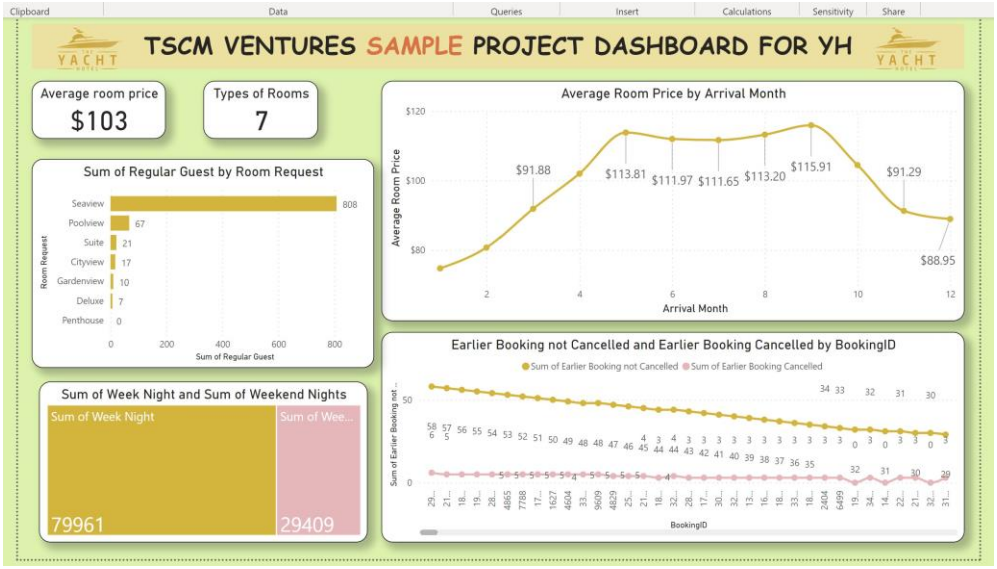

Figure 2: A sample of dynamic hotel booking pattern dashboard for hotel industry.

The Figure 2 illustrates the hotel booking pattern, and queries are raised about the average price of the different categories of rooms and the trend of the average price for the period of 18 months.

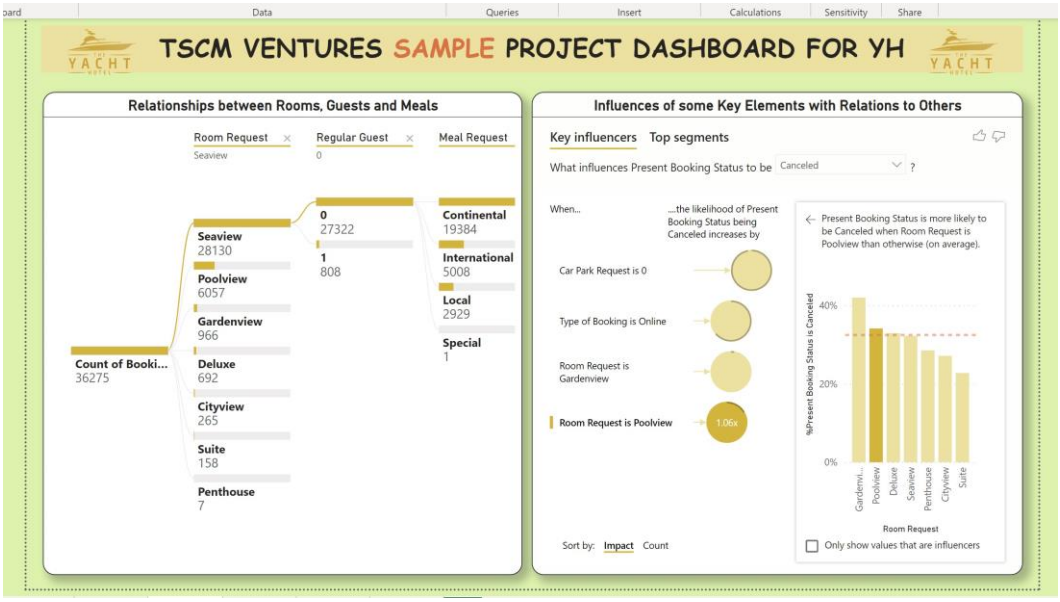

Figure 3: A sample of dynamic pattern interrelationship dashboard for hotel industry.

The Figure 3 illustrates how different operative elements of the hotel booking relate with each other and their impacts on one another. For example, queries were raised about how guests' choices impact on the choice of room and meals. Also, what influences their booking status have on their possibilities of returning and even promoting/recommending the hotel to friends, relatives or colleagues.

8. Conclusion

Some pertinent data information Business/Data Analyst shall require include among other:

For greater performance, efforts must be put in place to boost various aspects of the industry. Many reasonable KPIs will be set up to measure various performance from different angles to find laudable solutions.

These numerous queries and development of various dashboards are necessary for proper planning and develop future projections for the business to achieve greater results.

Reference:

1. https://learn.microsoft.com/en-us/training/modules/get-started-with-power-bi/1-introduction

2. Database Administrator (DBA) Roles & Responsibilities in The Big Data Age – BMC Software | Blogs