Specification Report: Go Car

- **Abstract**

We have analyzed the customer service operations of GoCar and visualized the data to provide information on its performance. Microsoft Dynamics CRM Service Hub is used to facilitate GoCars customer support operations and the dashboards are created through Microsoft Power BI.

- **About the Company**

GoCar (2019) is a car-sharing company in Ireland consisting of over 700 cars and vans. This company provides a mobile and desktop application interface to people and so far, has more than 40,000 members and rising (Murphy, 2013). They can book and rent any car they want. Currently, it has its operations across 250+ locations in Ireland. Initially, GoCar was started in Cork City with City Hall, UCC and Clark's Bridge being the first three GoBases. It was relaunched in Dublin in 2013 and was given 50 Gobases by the city council (Newstalk, 2015).

Over the next 6 Years, GoCar expanded its fleet to 700 and beyond the 'Big-Smoke' cities of Dublin and cork to over 16 other different counties. Also, GoCar is working towards a degrading environment and introduced the electric GoCars in 2012 and has tied up with Renault to introduce another 200 electric cars by 2020.

GoCar has made sure that the registration process is simple. Anyone can download the application which is available in both android and iOS. For the registration, one has to fill in the credentials, send pictures of International License and also take a selfie, add a valid Debit/Credit Card. It takes over 24 hours for the confirmation and then one is good to rent GoCar. It has been made sure that the prices of GoCar are competitive and the customer benefit increase over time. For a basic GoCar one must pay a one-time off payment of Euro 50 and then Euro 9 per hour also they get first 50 KMS free and thereafter a basic fee of Euro 0.50 Per KM. One can also book a GoFar for long-distance journey with Euro 0.15 Per KM with booking being over 6 hours. Example; A normal trip for 11 KMS with a duration of total 3 Hours would cost an individual between Eur 40 -Euro 60 whereas Euro 27 if one would take GoCar. Also, the customer gets the following benefits - Free Fuel - Insured Vehicle - Free Parking - Works with leap card - Transparent Monthly Invoice - 24/7 Support system.

- **Data sources**

We have mocked all the data from mockeroo.com. There are eight tables in our database namely booking, vehicle, vehicle type, GoBase, customer, county, country, and rating. Each table consists of 100-200 records. Every single table has its own primary key field.

● **Balanced Scorecard**

A Balanced Scorecard is a strategic planning and management system which a company uses to achieve the following:
  ▪ Put forward what the company is trying to achieve.
  ▪ Inform and keep everyone on the same line with what they are supposed to do day to day with a strategy.
  ▪ Organize projects, products, and other services.
  ▪ Keep a tap on progress made with the strategic targets.
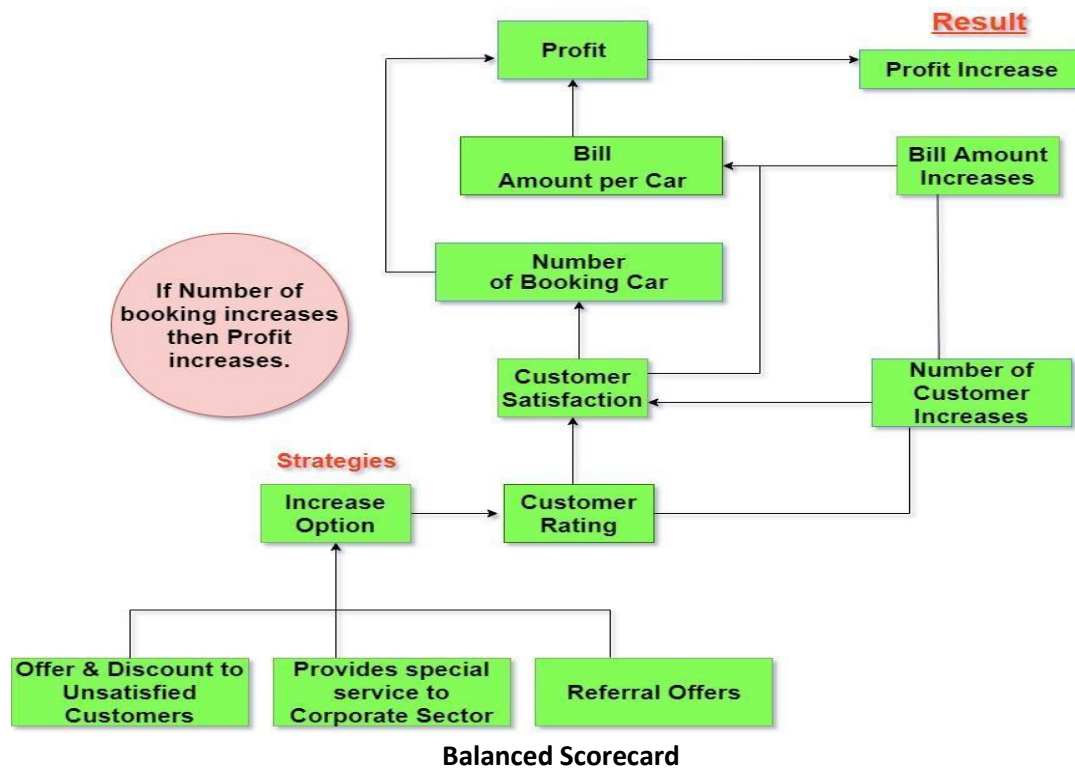

Balanced Scorecard

Diagram shows the Balanced Scorecard of GoCar, where we have shown Financial, Customer, Internal Process and Strategies for increasing the profit. In the business of car rental, the profit depends on the number of successful bookings made. One of the Powerful elements of BSC i.e Balanced Scorecard methodology is using strategically mapping to visualization and communicate how value is created by the company. The strategic map shows a logical, cause-and-effect connection between strategic objectives. Further, we have defined the 4-layer strategy structure of Balanced Scorecard.
  ● **Financial:** For Financial we would consider Profit, Bill Amount per car, Increased Bill Amount, Number of Bookings made.
  ● **Customers:** For Customers, we will have Customer satisfaction, Customer Rating, Increase in the number of customers.
  ● **Internal:** For Internal Process we have an Increase option, Increasing the number of customers.
  ● **Organizational Capacity:** Offers & Discounts to both sets of customers, Special service to Corporates and Referral codes would be in Organizational Capacity.

- **Entity – Relationship Diagram**

An Entity Relationship Diagram the relationship between entity stored in the database. An entity can be an object, a component of data. An entity set is a collection of all these entities. These entities further have attributes that define their properties.

Go car has 9 main tables, Booking is our main Entity and all others are connected to it. Whenever a car is rented a new record is created, and Vehicle Number, GoBase, County are the first three entities created apart from the Customer Entity. County & GoBase provide us with the ideal location from where the car will be rented out. Vehicle number generates the Vehicle ID, and through that cost per can be applied. The booking table will contain facts information which will be provided through dimensions table. When the trip is ended, rating table stores the feedback of the customer. We have 1 to many relationships as a car can be rented out multiple times.

The structural lead information contains the table, where we will have the table's attributes, their information and association. The simplest form of a dimensional model, database schema is one in which data is organized into facts and dimensions. Where fact is an event that is counted like sale, and Dimensions contains information about the facts for example date, product or customer. GoCar database schema is like snowflake topology with all the tables connected to a single table.
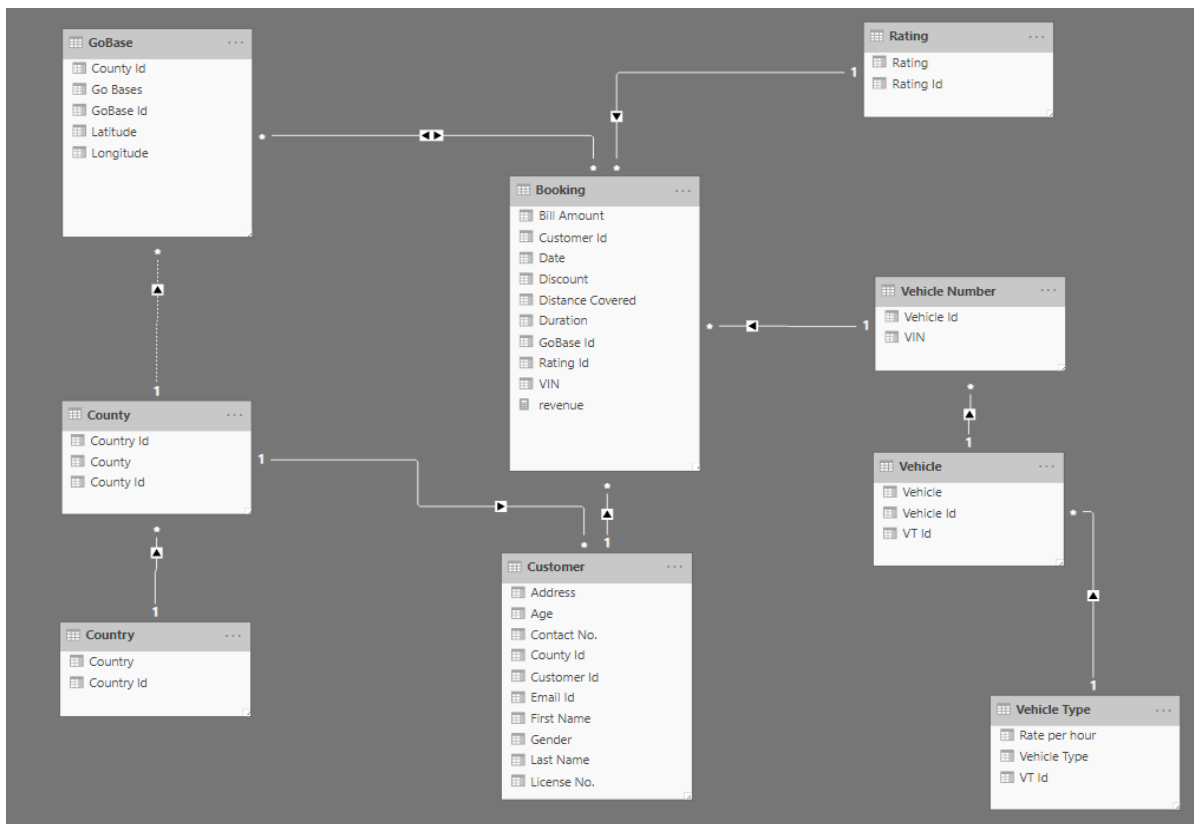

Fig: ER Diagram of GoCar

The diagram shows the relation between Customer, GoBase, Rating, Vehicle which represents dimensions tables and Booking table which is the facts table. Customer id, Rating Id, Country Id, County Id, VT ID and Gobase Id are primary keys of their respective tables which acts as foreign key in Booking Table. Each table

contain certain attributes which can be accessed through these Id's. Advantage of such structure is that it reduces the data redundancy.

- **Database design**

1. **Booking Table**: Customers who want to avail the GoCar services will book car via the online application using a customer number which is provided to them once they register and fill up their details. This booking table will have all the information regarding the day of the trip, the amount generated after completion of the trip etc. Booking table in our data warehouse is the master table that connects all the other tables of the database. This table is the fact table which consist of all the foreign keys to form relations with other tables such as vehicle, vehicle type, rating, vehicle number, Gobase, customer, county, country.
2. **Customer Table**: Whenever a customer signs up or register to access the Gocar application account he/she has to provide the information details like name, gender, age, contact number, email address, home address, location, country. Customer Id acts as a primary key in this table.
3. **Vehicle Table:** Gocar has a good range of vehicles. In the vehicle table, the vehicle types are given along with a vehicle type ID (primary key).
4. **Vehicle Type Table:** Gocar company has six types of cars which are available to rent. This table has the names of the vehicle types and their rate per hour. This table has relationship with the vehicle table.
5. **Vehicle Number Table:** Every car has a unique Vehicle identification number (VIN). This number has a code for specific vehicle. This VIN consists of 17 characters (digits and capital letters) that will act as a unique identifier for the vehicle. Our table has the VIN number against each vehicle ID. This table has a relation with vehicle table.
6. **Country Table:** This table shows the name of the countries. Currently, we have only one country available.
7. **County Table:** This table shows the list of counties in Ireland and the country Id.
8. **Gobase Table:** Gobase are nothing but the locations where the vehicles are generally parked. Every Gobase has an Id associated with it. This table has the list of Gobase Id, Gobase station names and the latitude and longitude values against each station.
9. **Rating Table:** Gocar company needs to progress with year in terms of customer service and revenue generated yearly. So, for improving customer service we must access the customer satisfaction how happy they are while taking this online car rental service. This is our final table where we have the customer's rating stored in it which has range from 1 to 5.

- **References**

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