**STEP IN PROJECT**

* + **Requirement Gathering**
  + **Data Overview**
  + **Connecting Data with Power bi**
  + **Data Cleaning**
  + **Data Modeling**
  + **Background Design in Power Point**
  + **Data Visualization and Charts Designs**
  + **Dashboard Building**
  + **Insights**

**REQUIREMENT**

**Clients want to create a Road Accident Dashboard for Year 2021 and 2022 so that they can have insight on the below requirements:-**

* **Primary KPI – Total Casualties and Total Accident values for Current Year and YOY growth.**
* **Primary KPI - Total Casualties By Accident Severity for Current Year and YOY growth.**
* **Secondary KPI – Total Casualties with respect to vehicle type for Current year**
* **Monthly Trend showing compression of casualties for current year and previous year.**
* **Casualties By Road type for current year.**
* **Current year casualties by Area wise**
* **Current year casualties by Location wise**
* **Current year casualties by Day/Night wise**
* **Total Accident and Total casualties by Location**

**POWER BI FUNCTIONALITES**

* **How to connect a raw data in power bi**
* **Data Cleaning in power query**
* **Data Processing**
* **Create a calendar table by using time intelligence function**
* **Data Modeling (Relationship b/w Multiple tables)**
* **YTD and YoY Growth calculation by using DAX Expressions**
* **KPI and Advance KPI generation**
* **Creating Custom Column**
* **Creating a Calculated measures**
* **Import images**
* **Creating a different Charts for visualization**

**Data Cleaning in power query: -**

* **Found Spell mistake under Accident severity (Like Fetal and Fatal) – corrected.**
* **Checked quality of all the columns – no issues found.**

**Data Processing: -**

* **Create a calendar/Date table by using time intelligence function – Calendar/CalendarAuto function**

DimDate = CALENDAR(FIRSTDATE(Data[Accident Date]),LASTDATE(Data[Accident Date]))

DimDate = CALENDAR(MIN(Data[Accident Date]),MAX(Data[Accident Date]))

* **Created new calculated columns like – YEAR, MONTH, WEEKDAY, FORMAT, CONCATENATE, QUARTER, WEEKEND....**

**Data Modeling (Relationship b/w Multiple tables): -**

* **We have created relaltionship between DIMDATE and Data Table.(ONE -TO- MANY)**

**KPI and Advance KPI generation: -**

* **YTD and YoY Growth calculation by using DAX Expressions**
* **Creating a Calculated measure**
* **causality**
* **Find out current year causality by using TotalYTD function.**
* **Find out pervious year causality by using below function.**
* **Calculate + SAMEPERIODLASTYEAR**
* **Calculate + DateADD**
* **Find out YOY causalities by using**
* **Divide((CY – PY)/PY)\*100**
* **Accident**
* **Find out current year Accident by using TotalYTD function.**
* **Find out pervious year Accident by using below function.**
* **Calculate + SAMEPERIODLASTYEAR**
* **Calculate + DateADD**
* **Find out YOY Accident by using**
* **Divide((CY – PY)/PY)\*100**
* **Find out current year casualties by accident severity – Fatal, Serious, Slight**
* **Created new group and covert type of vehicle into single entity.**

**Import images**

* **We have use some vehicle pics for better visualization.**

**Creating a different Charts for visualization**

* **We have used below chart to show trends**
* **Area chart to show trend related to CY vs PY Casualties.**
* **Multi-row card to show KPI values related to vehicle type**
* **Bar chart to show casualties by Road type.**
* **Pie chart to show Accident happened by light condition and severity**
* **Card to show KPI values.**
* **Map visual to show causalities by location using longitude and latitude(Avg)**