**Project Overview & Learning**

The project involves various stages, including data discovery, cleaning, and merging, culminating in the creation of a comprehensive Power BI dashboard. The audience is encouraged to act as stakeholders, providing feedback on the final dashboard. Discussions with a senior data analyst have also been conducted to explore further development and enhance the project's scope.

**Power BI Learnings**

In this project, I learned to create an interactive dashboard utilizing the following elements:

1. **Card** - Displaying key metrics in a clear and concise manner.
2. **Slicers** - Allowing users to filter data dynamically.
3. **Bookmarks** - Creating different views and navigation options within the report.
4. **Buttons** - Enhancing interactivity by enabling user actions.
5. **Stacked Bar Chart** - Visualizing categorical data comparisons.
6. **Line Chart** - Showing trends over time.
7. **Table** - Presenting detailed data in a tabular format.
8. **Scroller (3rd party visual)** - Displaying dynamic scrolling text or data.
9. **Published to Mobile and Web Versions** - Ensuring accessibility across devices.
10. **Numeric Parameter** - Allowing dynamic adjustments of data values.

**DAX Functions Learned**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sno** | **DAX function** | **Description** | **Example** |
|  | **DIVIDE** | Divides two numbers and provides an alternative result if the denominator is zero | DIVIDE([Total Profit Margin], [Revenue], 0) |
|  | **CALCULATE** | Evaluates an expression in a modified filter context. | CALCULATE([Revenue], SAMEPERIODLASTYEAR('sales date'[date])) |
|  | **ALL** | Removes filters from the specified columns or tables. | CALCULATE([Revenue], ALL('sales products')) |
|  | **SAMEPERIODLASTYEAR** | Returns a table that contains a column of dates shifted one year back in time. | SAMEPERIODLASTYEAR('sales date'[date]) |
|  | **SUM** | Adds all the numbers in a column. | SUM('sales transactions'[final\_sales\_amount]) |
|  | **GENERATESERIES** | Returns a single-column table containing a continuous series of values within a specified range. | GENERATESERIES(-0.05, 0.15, 0.01) |

**DAX Queries Used in the Project**

| **DAX Query** | **Description** |
| --- | --- |
| PROFIT\_MARGIN % = DIVIDE([TOTAL\_PROFIT\_MARGIN], [REVENUE], 0) | Calculates the profit margin percentage. |
| PROFIT\_MARGIN\_CONTRIBUTION % = DIVIDE([TOTAL\_PROFIT\_MARGIN], CALCULATE([TOTAL\_PROFIT\_MARGIN], ALL('sales products'), ALL('sales customers'), ALL('sales markets'))) | Calculates the contribution of profit margin. |
| REVENUE = SUM('sales transactions'[final\_sales\_amount]) | Calculates the total revenue. |
| REVENUE\_CONTRIBUTION % = DIVIDE([Revenue], CALCULATE([Revenue], ALL('sales products'), ALL('sales customers'), ALL('sales markets'))) | Calculates the revenue contribution percentage. |
| REVENUE\_LY = CALCULATE([Revenue], SAMEPERIODLASTYEAR('sales date'[date])) | Calculates the revenue for the same period last year. |
| SALES\_QUANTITY = SUM('sales transactions'[sales\_qty]) | Calculates the total sales quantity. |
| TARGET\_DIFF = [PROFIT\_MARGIN %] - PROFIT\_TARGETED[PROFIT\_TARGETED Value] | Calculates the difference between actual profit margin and targeted profit margin. |
| TOTAL\_PROFIT\_MARGIN = SUM('sales transactions'[profit\_margin]) | Calculates the total profit margin. |

**Parameter Used**

|  |  |
| --- | --- |
| **Parameter** | **Description** |
| PROFIT\_TARGETED = GENERATESERIES(-0.05, 0.15, 0.01) | Creates a series of targeted profit margin values ranging from -0.05 to 0.15 with a step of 0.01. |

**Extras**

1. **Learning on AIMS Grid for Project Management:**
   * **Purpose:** Identifying the core problem or pain point that the project aims to address, such as improving sales insights and reducing manual data processing efforts.
   * **Stakeholders:** Involving teams like marketing, sales, IT, and data analytics to ensure comprehensive project participation and alignment with organizational goals.
   * **End Result:** Clearly defining the desired outcome, such as creating a Power BI dashboard for real-time sales analytics accessible to regional managers and sales directors.
   * **Success Criteria:** Establishing measurable benchmarks for success, like reducing costs by 10% and eliminating manual data merging tasks currently done via Excel.