**Business / Functional Requirement Document**

**Project Title**: Sales Insights Dashboard  
**Prepared For**: Stakeholders & Decision-Makers  
**Prepared By**: Singh

**Project Overview**

The goal of this project is to create a comprehensive, interactive Sales Insights Dashboard that will enable stakeholders to easily visualize and analyze key sales metrics on a single page. This dashboard will use dynamic visuals to reveal trends, support strategic decisions, and highlight critical insights based on the data provided.

**Requirements**

**1. Data Gathering and Ingestion**

The following data sources will be used to build the dashboard:

* **Sales Data (Folder by Year)**: Multiple yearly sales files.
* **Categories (Excel)**: Contains product categories.
* **Geography (Excel)**: Details geographic data.
* **Product (CSV / Database)**: Includes product details and pricing.
* **Sales Representatives (Excel)**: Information on sales representatives.
* **Subcategories (Excel)**: Product subcategories.

**Task 1.1: Data Loading Mechanism**

Create an automated and resilient data-loading mechanism to populate a single **Sales Fact Table**:

* **Add New Files**: Automatically loads new yearly sales files upon refresh without configuration changes.
* **Remove Files**: If files are missing, data loading remains functional, without causing errors.

**2. Data Modeling**

The data will undergo a series of transformations to prepare it for visualization.

**Task 2.1: Location Splitting**

* Split the **Country** and **City** fields from the "Location" column in the **Sales Fact Table**.
* Ensure **Geo Mapping Compatibility** by setting the correct data types for Country and City fields.

**Task 2.2: Unique Key Creation**

* Generate a unique **GeoKey** to unify the **Sales** and **Geography** tables for seamless data linkage.

**Task 2.3: ID Cleanup**

* Create a reusable function to **remove the “ID - ”** prefix from IDs in **SalesRep** and **SubCategory** tables. This function should be invoked in both tables to standardize the ID columns.

**Task 2.4: Data Model Structure**

* Establish relationships between all tables, ensuring the data model is optimized for analysis.
* Use the **Calendar Table** to enable time-based calculations.

**3. DAX Calculations**

Implement the following DAX calculations for detailed insights:

**Task 3.1: Total Revenue**

* Calculate **Total Revenue** by multiplying each product’s **Retail Price** by the **Units Sold** in the **Sales Table**.

**Task 3.2: Total Cost**

* Calculate **Total Cost** by multiplying each product’s **Standard Cost** by the **Units Sold** in the **Sales Table**.

**Task 3.3: Gross Profit**

* Compute **Gross Profit** as **Total Revenue - Total Cost**.

**Task 3.4: Month-on-Month (MoM) Gross Profit Growth %**

* Create a **MoM Gross Profit Growth %** measure to monitor monthly changes and support trend analysis.

**Task 3.5: Average Sales per Day**

* Calculate the **Average Sales per Day** by dividing the **Total Revenue** by the actual sales days.

**Task 3.6: Product Analysis Metrics**

For strategic analysis, include the following metrics:

* **Product Drop or Increase Analysis** based on previous periods.
* **Quarter-on-Quarter (QoQ) Growth Rate** as this is a **Quarterly Business Report (QBR)**.

**4. Dashboard Assembly**

Using the calculated measures, create an intuitive, one-page **Sales Insights Dashboard** with the following specifications:

* **Comprehensive Visuals**: Use charts, graphs, and tables to represent insights effectively.
* **Time-Sorted Visuals**: Ensure months are sorted from January to December when plotting time-based data.
* **Interactive Elements**: Enable drill-down capabilities to explore Product, Region, and Category breakdowns.
* **KPI Indicators**: Include KPI indicators for revenue, costs, profit, and growth rates to highlight key metrics at a glance.

This dashboard will empower stakeholders to understand trends, identify growth opportunities, and make data-driven decisions efficiently.