**Procurement Spend Analysis Project Documentation**

**1. Project Overview**

This project involves analyzing procurement spend data to generate multiple reports that support strategic decision-making, financial planning, and compliance monitoring. The analysis is based on purchase order (PO) data spanning multiple regions, currencies, and categories.

**2. Data Sources**

**2.1. Excel File:**Purchase\_data.xlsx

Contains the following sheets:

* **Scenarios**: Describes the analysis requirements and reporting objectives.
* **Data**: Contains the raw purchase order data.
* **Region-Lookup**: Provides mapping for regions and exchange rates.
* **Category Mapping**: Maps material groups to categories and pipeline categories.

**3. Analysis Objectives & Reporting Requirements**

**3.1. Spend Analysis in USD**

**Objective**: Convert all spend values to USD using provided exchange rates and analyze spend across multiple dimensions.

**Reports to be created**:

* By Region
* By Category
* By Pipeline Category
* By Financial Year
* By FY Quarters
* By Weekday

**Note**: Region mapping:

* Europe Region: EU, MEA, Europe
* USA Region: North America, USA, America
* Asia Region: AP, Asia

**Exchange Rates**:

* EUR → 1.14
* GBP → 1.27
* INR → 0.014
* USD → 1

**3.2. % of US Spend to Total Spend**

**Objective**: Calculate the percentage of US spend relative to total spend, broken down by category.

**3.3. Maximum and Minimum Order Values**

**Objective**: Identify the highest and lowest spend values by category.

**3.4. Processing Charges by Region**

**Objective**: Calculate processing charges based on spend tiers:

| From (USD) | To (USD) | Processing Charge |
| --- | --- | --- |
| 0 | 1000 | 2% |
| 1000 | 2500 | 3% |
| 2500 | 5000 | 4% |
| 5000 | 10000 | 5% |
| 10000 | 9999999 | 6% |

**3.5. Special Approval Report**

**Objective**: Identify purchases in the Asia Region over USD 5,000 for categories **CAPITAL EQUIP & SERVICES** or **FINISHED PRODUCTS**. Report the number of such cases by category.

**3.6. Cash Requirement Report**

**Objective**: Calculate payment dates (3 months from PO date) and forecast cash requirements by year and month.

**4. Data Structure**

**4.1. Data Sheet Columns**

* **Region**: Geographic region of purchase
* **PO Date**: Date of purchase order
* **PO Number**: Unique identifier
* **MG Key**: Material group key
* **Material Group**: Description of material/service
* **Currency**: Original currency of spend
* **Spend (Global Currency)**: Spend amount in original currency

**4.2. Region-Lookup Sheet**

* Maps regions to broader categories
* Provides exchange rates for currency conversion
* Defines processing charge tiers

**4.3. Category Mapping Sheet**

* Maps **Material Group** to **Category** and **Pipeline Category**
* Used for categorizing spend for analysis

**5. Key Assumptions & Notes**

* Financial year is assumed to be calendar year (Jan–Dec) unless otherwise specified.
* Weekend and public holiday impacts on payment dates are not considered.
* All currency conversions are based on fixed exchange rates provided.
* Special approval rules apply only to Asia region and specific categories.

**6. Output Deliverables**

1. **Spend Analysis Dashboard** (USD)
2. **US Spend Percentage Report**
3. **Min/Max Spend by Category**
4. **Processing Charges Report**
5. **Special Approval Cases Report**
6. **Cash Requirement Forecast**

**7. Tools & Techniques**

* **Excel**: Data storage and initial processing
* **SQL**: querying and aggregation
* **Power BI**: Visualization

**8. Next Steps**

1. Clean and validate the data.
2. Map regions and categories using lookup tables.
3. Convert all spend values to USD.
4. Apply processing charge logic.
5. Identify special approval cases.
6. Calculate payment dates and cash flow requirements.
7. Generate all required reports.

This documentation serves as a guide for the analysis and reporting process. All reports should be validated against business rules and data quality standards before final delivery.