**Industry Core: Infrastructure**

**Business Scenario:**

A British company has been growing its business since its infancy stage. Their sales have been good as they deal with office infrastructure. However, the VP Sales is not very happy with the refunds that the company has been providing to its customers. The VP wanted a decision-driven method to be employed rather than a traditional approach to deriving a strategy.

**Objective:**

As a first step the VP planned to evaluate all the BI tools available in the market. Tableau was selected as it met his requirements. Using Tableau, he wanted his team members to give him the forecast of Sales for the next year as well as the probability of refunds category-wise for a year. This will help him plan his next steps to avoid the refunds.

He wanted a dashboard that would contain the following:

• A list of orders returned by the customers from the Top 10 Countries (in terms of refund)

• Top 10 Countries mapped on the World Map that had most of the refunds

• Predict the refund for next 1 year category-wise

**About the Data:**

The dataset being used is “global\_superstore2016”. It consists of dimensions like Category, Sub-Category, OrderID, ProductID, OrderDate, etc.

**Actions to be Performed to Create the Dashboard:**

• Create Hierarchies and Folders in the dataset provided

• Generate a list of orders returned from customers and compare it to the original sales, sort the visualization in ascending order in terms of returned orders, for the top 10 countries in terms of refunds.

• Map top 10 countries, with most of the refunds on the world map

• Predict the returned sale with the lowest and actual forecast of the data

• Add a URL action to represent details of the countries

• Finally publish your work to Tableau Server/ Online

**Tools Required:**

Tableau Desktop, Tableau Server, or Tableau Online

**Solution :**

**1. Set Up the Dataset**

Start by loading the **"global\_superstore2016"** dataset into Tableau. It should contain dimensions like Category, Sub-Category, OrderID, ProductID, OrderDate, etc.

**2. Create Hierarchies and Folders**

Organize the dataset by creating hierarchies and folders:

* **Hierarchies** can be created by grouping related dimensions like:
  + Country > State > City
  + Category > Sub-Category
  + OrderDate > Year > Month > Day
* **Folders** help you organize dimensions and measures for easy access. Group fields like OrderID, OrderDate, and ProductID under "Orders".

**3. Generate a List of Returned Orders**

To generate a list of orders that were returned:

1. Drag OrderID, Country, Sales, and Refunds (if available) to your worksheet.
2. Filter the data to show only the orders that were returned (use a filter on Refund status if the dataset has a refund indicator).
3. Create a calculated field to calculate the percentage of refunded sales by country:

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Refund Percentage = SUM([Refund]) / SUM([Sales])

1. Sort this in **descending order** by Refund Percentage to get the top 10 countries with the most refunds.

**4. Visualize Top 10 Countries on a World Map**

1. Drag Country onto the Map in Tableau.
2. Filter the data to the top 10 countries by Refund Percentage.
3. Show a **size-based map** where the size of each country represents the refund percentage or the number of returned orders.
4. Use color coding for the refund percentage, making it visually clear which countries have the highest refund rates.

**5. Predict Refund for the Next Year (Category-Wise)**

Tableau provides built-in forecasting tools, which you can use to predict refunds for the upcoming year:

1. Create a **new worksheet**.
2. Drag Category, Order Date, and Refund into the view.
3. Set the time frame to **Year** on the x-axis (Order Date) and sum of refunds on the y-axis.
4. Right-click the chart and select **Add Forecast**. Configure the forecast settings to predict refunds for the next year.
5. Add **Category** as a detail, so that the forecast is broken down by Category.

**6. Add URL Action for Country Details**

To enhance your dashboard:

1. Add a **URL action** that links to additional information about the countries.
2. You can use external links (for example, to Wikipedia pages for each country) or detailed dashboards.
3. In your map view, go to Worksheet > Actions > Add Action > URL. Here, specify the URL format to link it to the Country field (use the Country field as a variable).

**7. Publish to Tableau Server or Tableau Online**

Once the dashboard is complete:

1. Go to File > Publish to Tableau Server or Tableau Online.
2. Ensure that your dashboard is interactive, and all filters and actions are functioning as intended.
3. Share the link with your team and the VP Sales.

**Final Deliverables:**

* A **dashboard** containing:
  + A list of the **top 10 countries** with most refunds, compared to sales.
  + A **world map** highlighting these countries.
  + A **forecast** of refunds for the next year, broken down by category.
  + **URL actions** for more details on each country.

This structured approach should meet the requirements of your VP, giving both insight into past performance and helping plan for future actions with predicted refunds.

**New Second solution**

Solid plan! Here's a quick recap so you can ensure each step is covered:

1. **Set Up the Dataset**
   * Load "global\_superstore2016" into Tableau.
2. **Create Hierarchies and Folders**
   * Create hierarchies: Country > State > City, Category > Sub-Category, OrderDate > Year > Month > Day.
   * Group fields like OrderID, OrderDate, and ProductID under "Orders".
3. **Generate a List of Returned Orders**
   * Filter and list returned orders.
   * Create Refund Percentage = SUM([Refund]) / SUM([Sales]).
   * Sort by Refund Percentage to get the top 10 countries.
4. **Visualize Top 10 Countries on a World Map**
   * Map countries with size and color coding based on refund percentage or number of returned orders.
5. **Predict Refund for the Next Year (Category-Wise)**
   * Use Tableau's forecasting tools.
6. **Add URL Action for Country Details**
   * Add URL actions to link to more details for each country.
7. **Publish to Tableau Server or Tableau Online**
   * Ensure interactivity and share the dashboard link.