Module 10: In-Class Project

Project - 2

PEW Retail Dashboard

The following are the prerequisites to execute this project.

1. Power BI Desktop needs to be installed.
2. Power BI Data Gateway needs to be installed and configured.
3. Power BI Pro subscription is required.

Problem Statement: PEW Retail Inc. Ltd. has subsidiaries across the globe, and they are selling products to various customers scattered across different geographies. They are looking to have a consolidated dashboard with the following requirements:

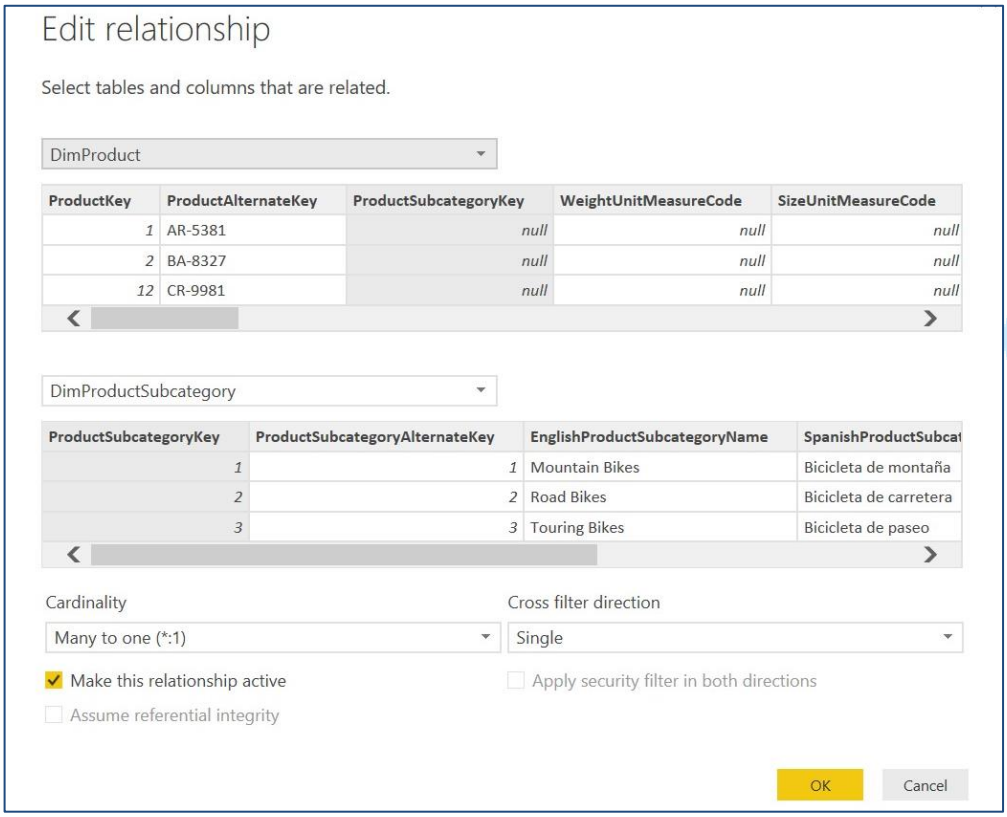
1. How much Tax do they pay based on the various region they do business in?
2. Number of orders received by various product categories.
3. Who are their top five customers in consuming their products?
4. Order received by various regions to various product categories and products.
5. All this data is restricted as per the region. For example, a business user who owns an Australian subsidiary is restricted only to see the Australian data.
6. Any changes or additions to the sales data should automatically get reflected to the Dashboard without any manual intervention.
7. Export the reports to a Power BI Presentation.

Solution

Step 1: Load/Import the data from all the below CSV files using the Power BI desktop.

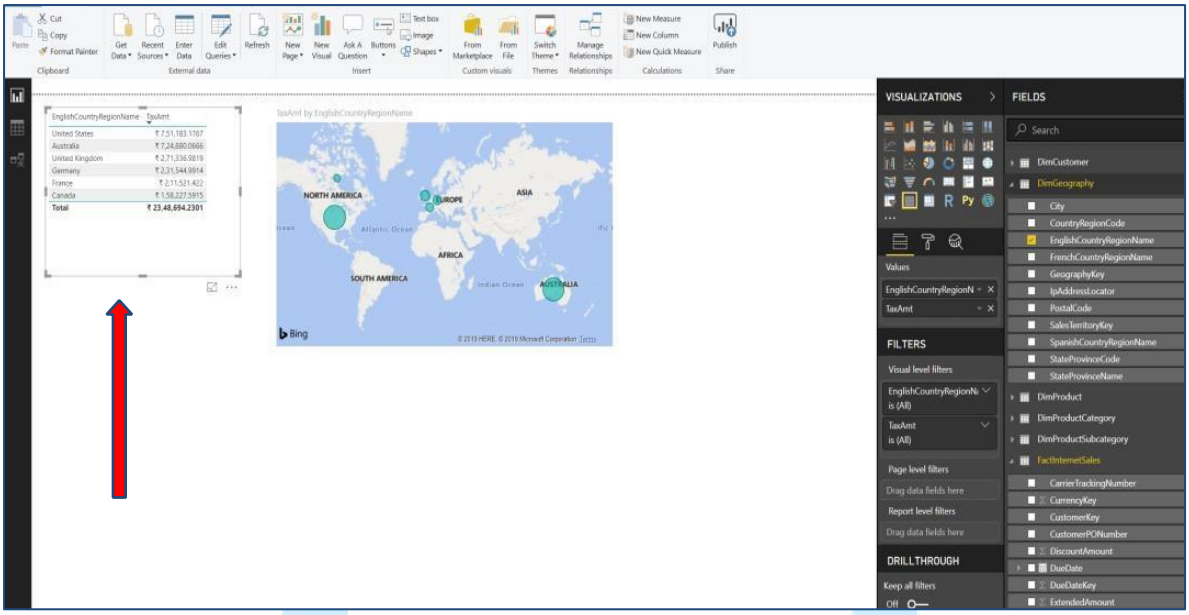
- FactInternetSales.csv
- DimProduct.csv
- DimProductCategory.csv
- DimProductSubCategory.csv
- DimGeography.csv
- DimCustomer.csv

Step 2: After loading the data, make sure you create the relationship between **DimProduct** and **DimProductSubCategory** as shown below:



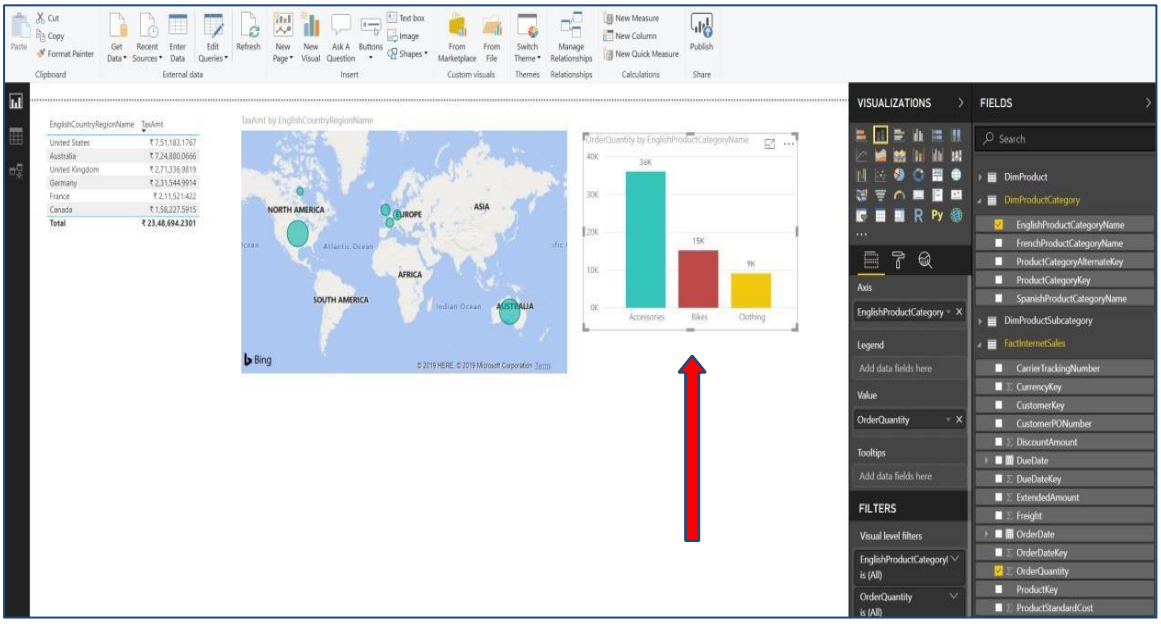
Step 3: Tax amount they are paying based on the various region they do business:

- Drag and drop **TaxAmt** from **FactInternetSales** and **EnglishCountryRegionName** from **DimGeography** as shown below:



Step 4: Number of orders received by various product categories.

- Drag and drop **EnglishProductCategoryName** from **DimProductCategory** and **OrderQuantity** from **FactInternetSales**.
- You can change the colors formatting as per your choice as shown below:



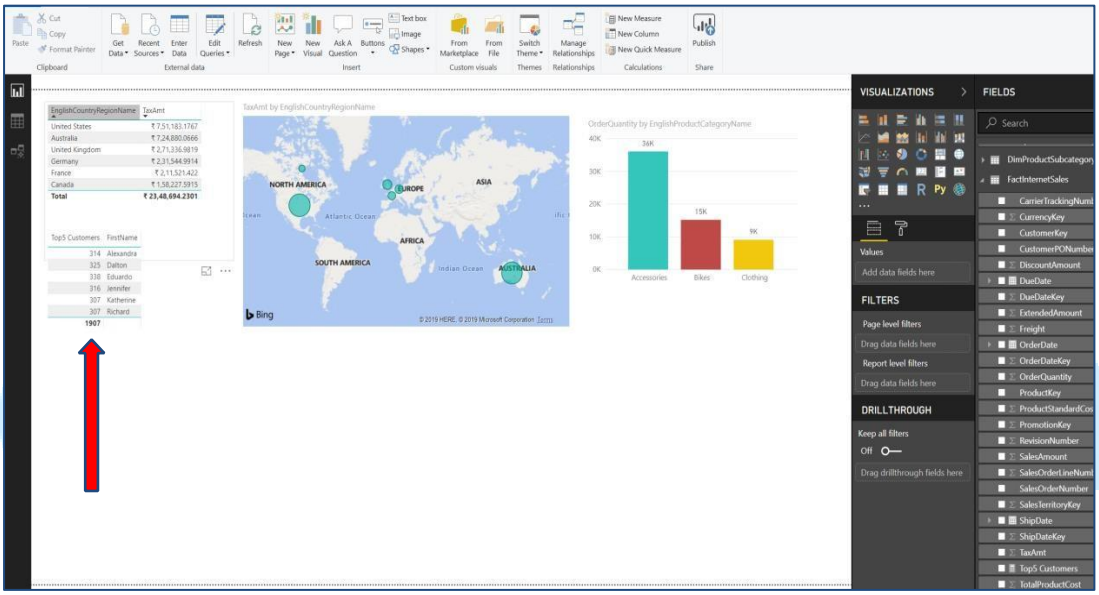
Step 5: Their top 5 customers

Create Measure Total Orders under **DimCustomer** using below DAX:

```
Total Orders = SUM(FactInternetSales[OrderQuantity])
```

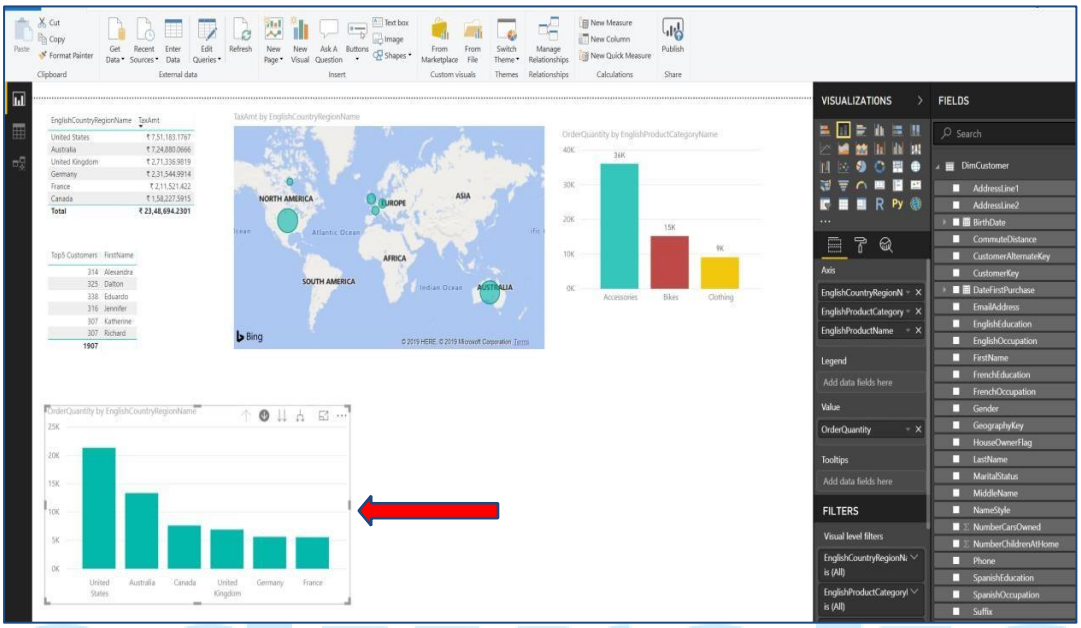
Under `FactInternetSales`, create a Measure top 5 customers using below DAX:

```
Top5 Customers = CALCULATE([Total Orders],
    FILTER(VALUES(DimCustomer[FirstName]),
        IF(RANKX(ALL(DimCustomer[FirstName]),[Total
Orders],,DESC)<=5,[Total Orders],BLANK())))
```



Step 6: Orders received by various regions by to various product categories and products:

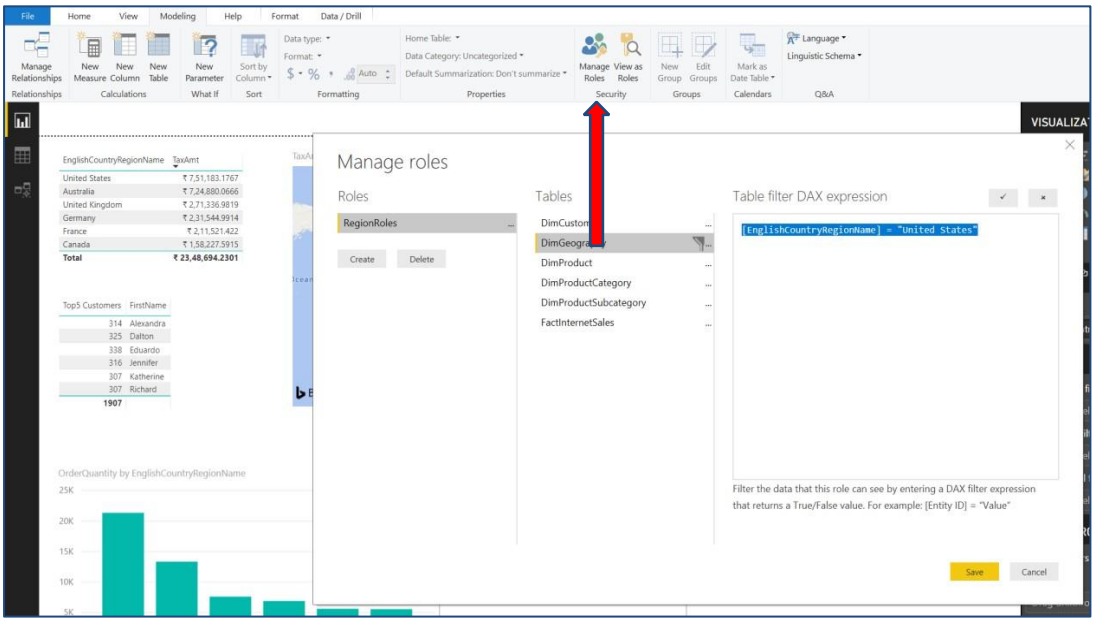
- Drag fields **EnglishCountryRegionName**, **EnglishProductCategoryName** and **EnglishProductName** on Axis. Drag **OrderQuantity** in Value as shown below.



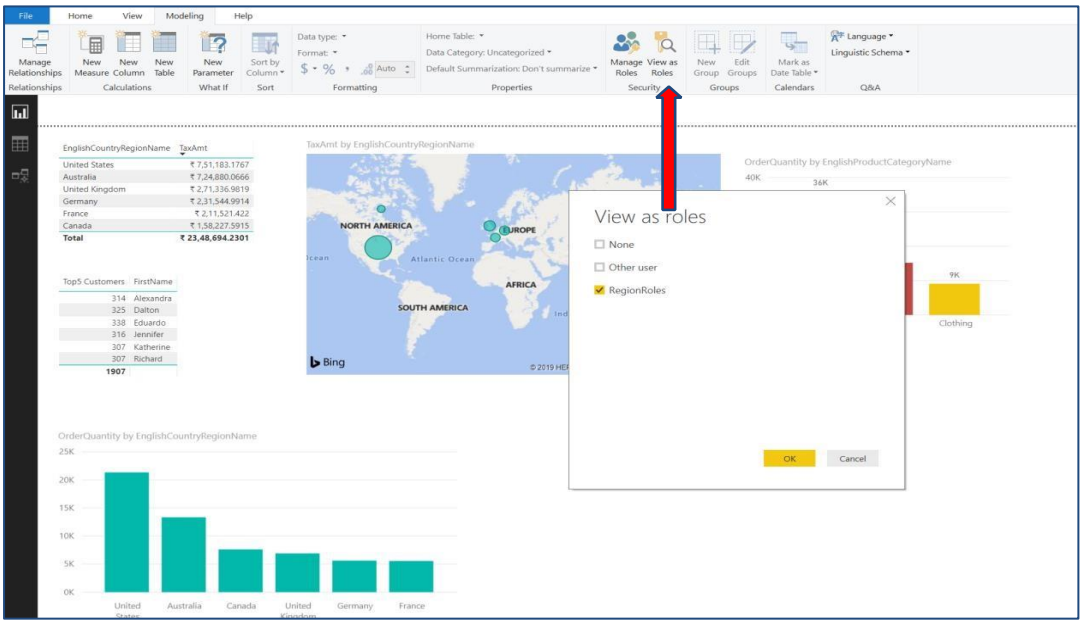
Step 7: All this data is restricted as per the region.

- Under **Modeling**, click on **Manage Roles** and Create New as **RegionRoles** with the below DAX:

```
[EnglishCountryRegionName] = "United States"
```

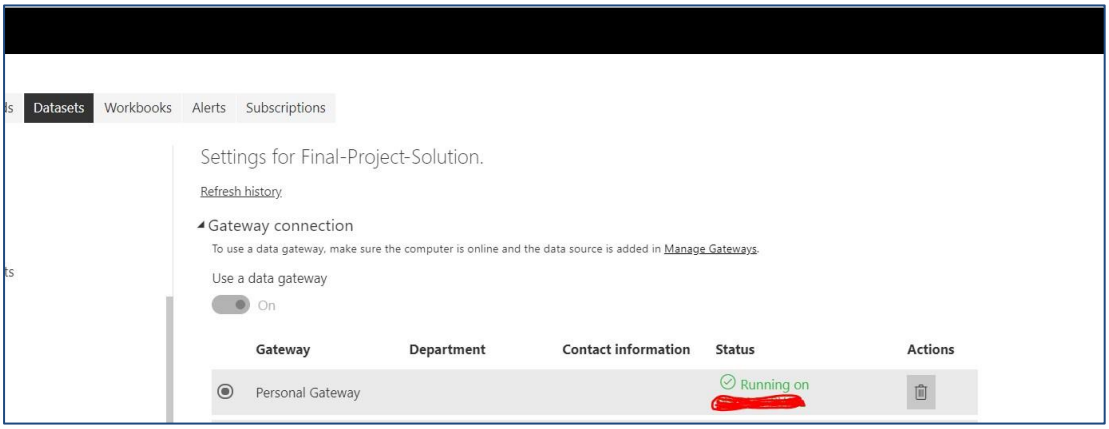


- You can even view as Roles using **View as Role** to test the role.

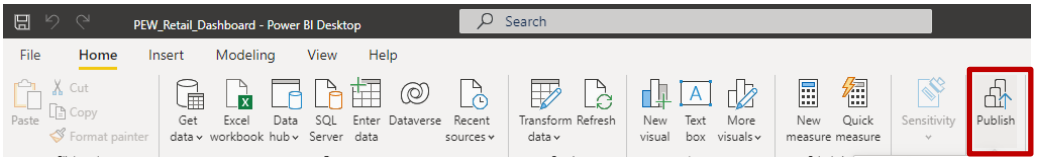


Step 8: Any changes or addition to the sales data should automatically get reflected to the Dashboard without any manual intervention.

- For this, install and configure the Power BI Data Gateway (personal mode) from here https://powerbi.microsoft.com/en-us/gateway/

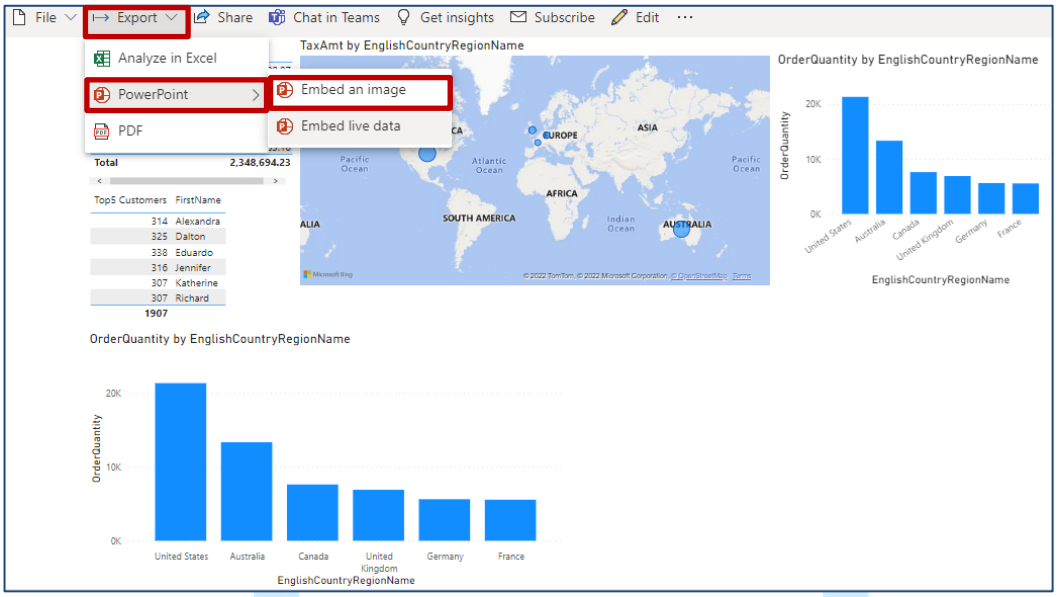


Step 9: Publish the report on the Power BI service by clicking on **Publish** option.



Step 10: After publishing the report, we users can export the Reports to a Power BI Presentation.

- In **Power BI Service**, select the **Report,** then **File, Export to PowerPoint**, and select **Embed an image.**



- After successful export, we can open the *PowerPoint* file with embedded report.