

Data Cleansing & Transformation:

Data was cleaned and transformed in SQL Server before being extracted as a csv file for Power BI (all data is from Microsoft's AdventureWorks sample databases).

DIM_Calendar

```
-- Cleansed DIM_Calendar Table --  
  
SELECT  
  
    [DateKey],  
    [FullDateAlternateKey] AS Date,  
    --[DayNumberOfWeek],  
    [EnglishDayNameOfWeek] AS Day,  
    --[SpanishDayNameOfWeek],  
    --[FrenchDayNameOfWeek],  
    --[DayNumberOfMonth],  
    --[DayNumberOfYear],  
    --[WeekNumberOfYear],  
    [EnglishMonthName] AS Month,  
    Left([EnglishMonthName], 3) AS MonthShort, -- Useful for front end date navigation and front end  
graphs.  
    --[SpanishMonthName],  
    --[FrenchMonthName],  
    [MonthNumberOfYear] AS MonthNo,  
    [CalendarQuarter] AS Quarter,  
    [CalendarYear] AS Year --[CalendarSemester],  
    --[FiscalQuarter],  
    --[FiscalYear],  
    --[FiscalSemester]  
  
FROM [AdventureWorksDW2019].[dbo].[DimDate]  
  
WHERE CalendarYear >= 2022
```

DIM_Customers

```
-- Cleansed DIM_Customers Table --
SELECT
  c.customerkey AS CustomerKey,
  --      ,[GeographyKey]
  --      ,[CustomerAlternateKey]
  --      ,[Title]
  c.firstname AS [First Name],
  --      ,[MiddleName]
  c.lastname AS [Last Name],
  c.firstname + ' ' + lastname AS [Full Name],
  -- Combined First and Last Name
  --      ,[NameStyle]
  --      ,[BirthDate]
  --      ,[MaritalStatus]
  --      ,[Suffix]
  CASE c.gender WHEN 'M' THEN 'Male' WHEN 'F' THEN 'Female' END AS
Gender,
  --      ,[EmailAddress]
  --      ,[YearlyIncome]
  --      ,[TotalChildren]
  --      ,[NumberChildrenAtHome]
  --      ,[EnglishEducation]
  --      ,[SpanishEducation]
  --      ,[FrenchEducation]
  --      ,[EnglishOccupation]
  --      ,[SpanishOccupation]
  --      ,[FrenchOccupation]
  --      ,[HouseOwnerFlag]
  --      ,[NumberCarsOwned]
  --      ,[AddressLine1]
  --      ,[AddressLine2]
  --      ,[Phone]
  c.datefirstpurchase AS DateFirstPurchase,
  --      ,[CommuteDistance]
  g.city AS [Customer City] -- Joined in Customer City from
Geography Table
FROM [AdventureWorksDW2019].[dbo].[DimCustomer] as c
  LEFT JOIN dbo.dimg geography AS g
    ON g.geographykey = c.geographykey
ORDER BY CustomerKey ASC -- Ordered List by CustomerKey
```

DIM_Products

```
-- Cleansed DIM_Products Table --
SELECT
    p.[ProductKey],
    p.[ProductAlternateKey] AS ProductItemCode,
    --      ,[ProductSubcategoryKey],
    --      ,[WeightUnitMeasureCode]
    --      ,[SizeUnitMeasureCode]
    p.[EnglishProductName] AS [Product Name],
    ps.EnglishProductSubcategoryName AS [Sub Category], -- Joined in from Sub Category
Table
    pc.EnglishProductCategoryName AS [Product Category], -- Joined in from Category
Table
    --      ,[SpanishProductName]
    --      ,[FrenchProductName]
    --      ,[StandardCost]
    --      ,[FinishedGoodsFlag]
    p.[Color] AS [Product Color],
    --      ,[SafetyStockLevel]
    --      ,[ReorderPoint]
    --      ,[ListPrice]
    p.[Size] AS [Product Size],
    --      ,[SizeRange]
    --      ,[Weight]
    --      ,[DaysToManufacture]
    p.[ProductLine] AS [Product Line],
    --      ,[DealerPrice]
    --      ,[Class]
    --      ,[Style]
    p.[ModelName] AS [Product Model Name],
    --      ,[LargePhoto]
    p.[EnglishDescription] AS [Product Description],
    --      ,[FrenchDescription]
    --      ,[ChineseDescription]
    --      ,[ArabicDescription]
    --      ,[HebrewDescription]
    --      ,[ThaiDescription]
    --      ,[GermanDescription]
    --      ,[JapaneseDescription]
    --      ,[TurkishDescription]
    --      ,[StartDate],
    --      ,[EndDate],
    ISNULL (p.Status, 'Outdated') AS [Product Status]
FROM [AdventureWorksDW2019].[dbo].[DimProduct] as p
    LEFT JOIN dbo.DimProductSubcategory AS ps
        ON ps.ProductSubcategoryKey = p.ProductSubcategoryKey
    LEFT JOIN dbo.DimProductCategory AS pc
        ON ps.ProductCategoryKey = pc.ProductCategoryKey
ORDER BY p.ProductKey ASC
```

FACT_InternetSales

```
-- Cleansed FACT_InternetSales Table --  
SELECT  
    [ProductKey],  
    [OrderDateKey],  
    [DueDateKey],  
    [ShipDateKey],  
    [CustomerKey],  
    -- ,[PromotionKey]  
    -- ,[CurrencyKey]  
    -- ,[SalesTerritoryKey]  
    [SalesOrderNumber],  
    -- [SalesOrderLineNumber],  
    -- ,[RevisionNumber]  
    -- ,[OrderQuantity],  
    -- ,[UnitPrice],  
    -- ,[ExtendedAmount]  
    -- ,[UnitPriceDiscountPct]  
    -- ,[DiscountAmount]  
    -- ,[ProductStandardCost]  
    -- ,[TotalProductCost]  
    [SalesAmount]  
    -- ,[TaxAmt]  
    -- ,[Freight]  
    -- ,[CarrierTrackingNumber]  
    -- ,[CustomerPONumber]  
    -- ,[OrderDate]  
    -- ,[DueDate]  
    -- ,[ShipDate]  
FROM [AdventureWorksDW2019].[dbo].[FactInternetSales]  
WHERE LEFT (OrderDateKey, 4) >= YEAR(GETDATE())-2 -- Ensures we  
always only bring two years of date from extraction.  
ORDER BY OrderDateKey ASC
```

*The sales budget was provided in Excel format and connected in the data model in Power BI as FACT_Budget.