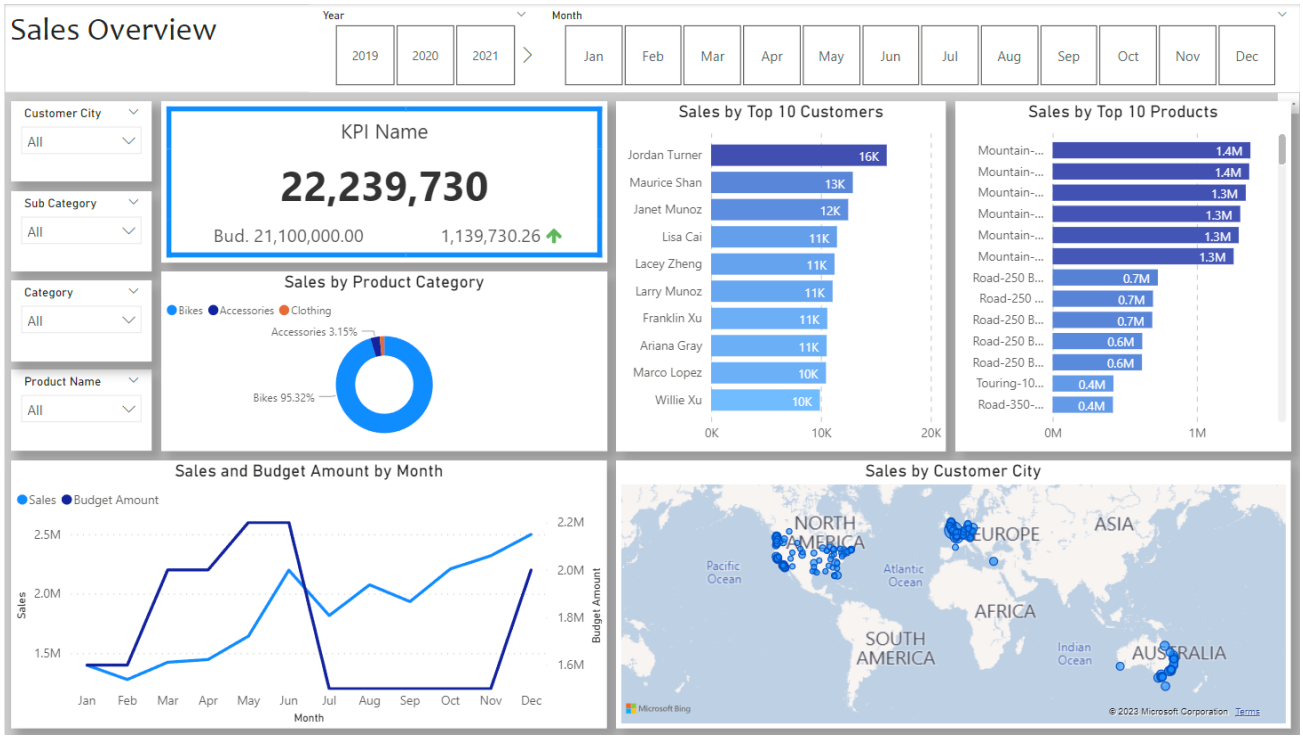
Data Analyst Project - Sales Management



Business Requests and User Stories

The business request for this data analyst project was an executive sale report for sales managers. Based on the request that was made from the business, the following user stories were defined to fulfill delivery and ensure that acceptance criteria was maintained throughout the project.

#	As a(role)	I want	So that	Acceptance Criteria
1	Sales Manager	Dashboard overview of internet sales	Can follow which product sells the best	A Power BI dashboard which updates once a day
2	Sales Representative	Detailed overview of internet sales per customer	Can follow up with top customers	A Power BI dashboard which filters data for each customer
3	Sales Representative	Detailed overview of internet sales per product	Can followed up on product that sells the best	A Power BI dashboard which filters data for each product
4	Sales Manager	Dashboard overview of internet sales	Follows sales over time against budget	A Power BI dashboard with graphs and KPI's

Data Cleansing and Transformation

To create the necessary data model for doing analysis and fulfilling the business needs defined in the user stories the following tables were extracted using SQL.

DIM_Product

DIM_Product.txt

```
-- Cleaned DIM_Products_Table--
SELECT
    p.[ProductKey],
    p.[ProductAlternateKey] AS ProductItemCode,
      --[ProductSubcategoryKey]
      --[WeightUnitMeasureCode]
      --[SizeUnitMeasureCode]
    p.[EnglishProductName] AS [Product Name],
    ps.EnglishProductSubcategoryName AS [Sub Category],
    pc.EnglishProductCategoryName AS [Product Category],
      --[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 [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
```

DIM_Calendar

DIM_Calendar.txt

```
-- Cleansed DIM_Date 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 >= 2019
```

DIM_Customer

DIM_Customer_Table.txt

```
--Cleaned DIMN_CustomerTable--
SELECT
      c.customerkey AS [Customer Key],
      --[GeographyKey]
      --[CustomerAlternateKey]
      --[Title]
      c.firstname AS [First Name],
      --[Middle Name]
      c.lastname AS [Last Name],
      c.firstname + ' ' + lastname AS [Full 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 [First Purchase],
      --[CommuteDistance]
      g.city AS [Customer City]
      FROM
      dbo.dimcustomer AS c
      LEFT JOIN dbo.dimgeography AS g ON g.geographykey = c.geographykey
      ORDER BY
      CustomerKey ASC
```

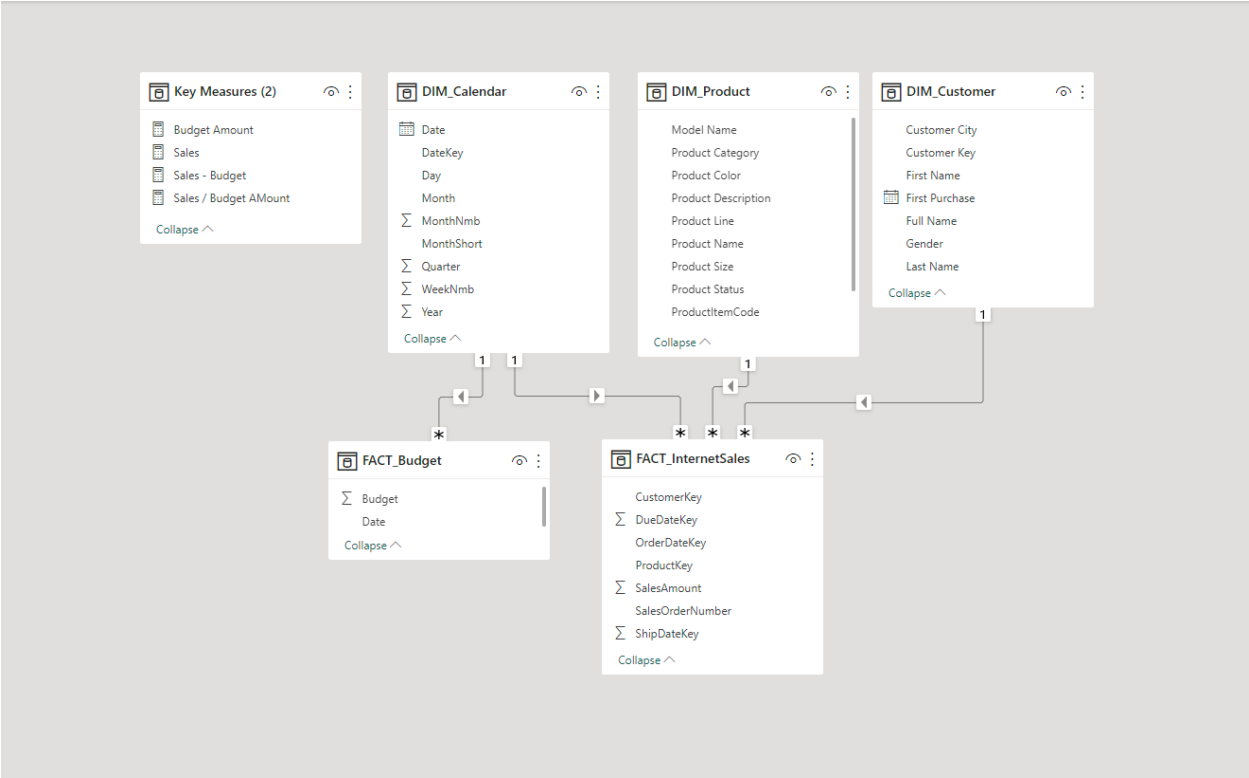
FACT_InternetSales

DIM_InternetSales.txt

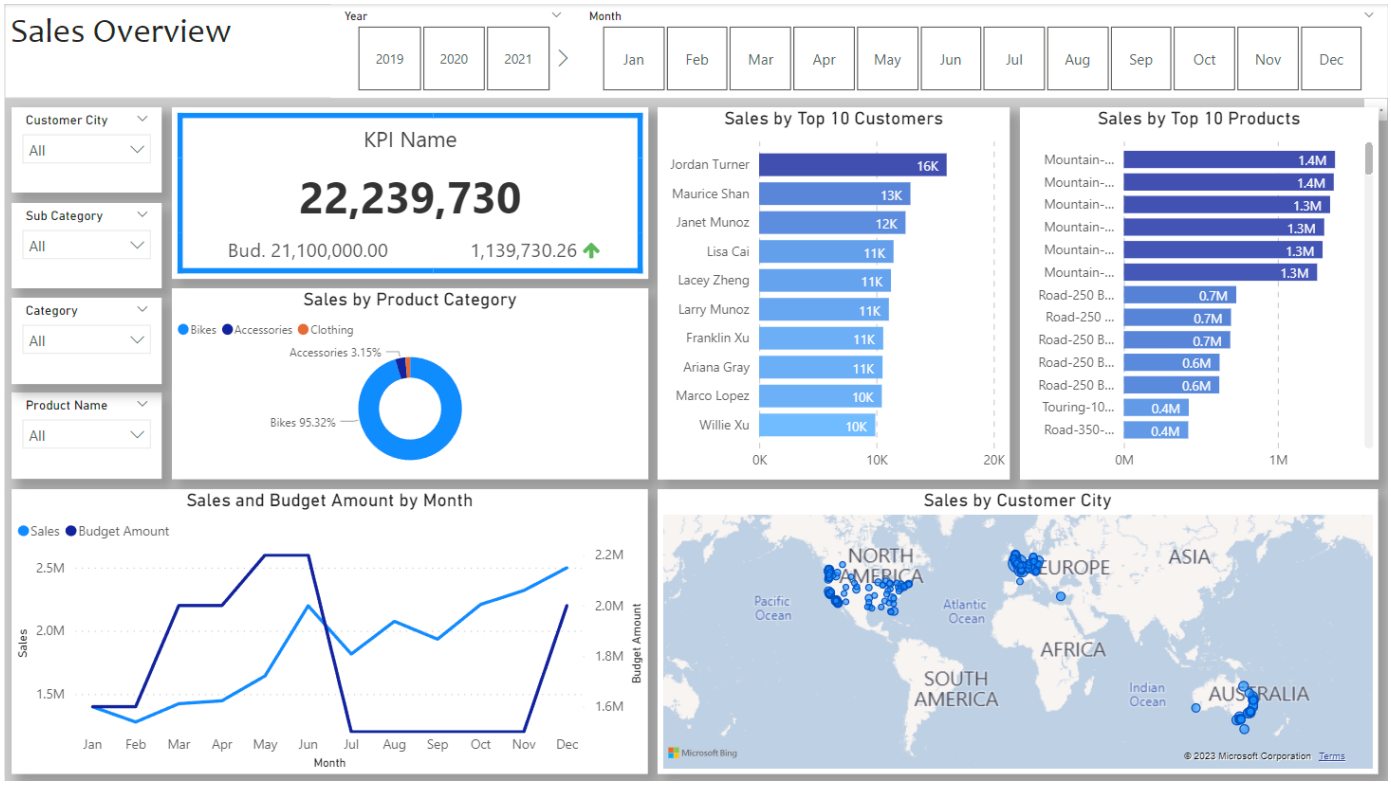
```
--Cleaned FACT_InternetSales--
SELECT
    [ProductKey],
    [OrderDateKey],
    [DueDateKey],
    [ShipDateKey],
    [CustomerKey],
    --[PromotionKey]
    --[CurrencyKey]
    --[SalesTerritoryKey]
    [SalesOrderNumber],
    --[SalesOrderLineNumber]
    --[RevisionNumber]
    --[OrderQuantity]
    --[UnitPrice]
    --[ExtendedAmount]
    --[UnitPriceDiscountPct]
    --[DiscountAmount]
    --[ProductStandardCost]
    --[TotalProductCost]
    [SalesAmount]
    --[TaxAmt]
    --[Freight]
    --[CarrierTrackingNumber]
    --[CustomerPONumber]
    --[OrderDate]
    --[DueDate]
    --[ShipDate]
FROM
    [AdventureWorksDW2019].[dbo].[FactInternetSales]
WHERE
    LEFT (OrderDateKey, 4) >= YEAR(GETDATE()) -4
ORDER BY
    OrderDateKey ASC
```

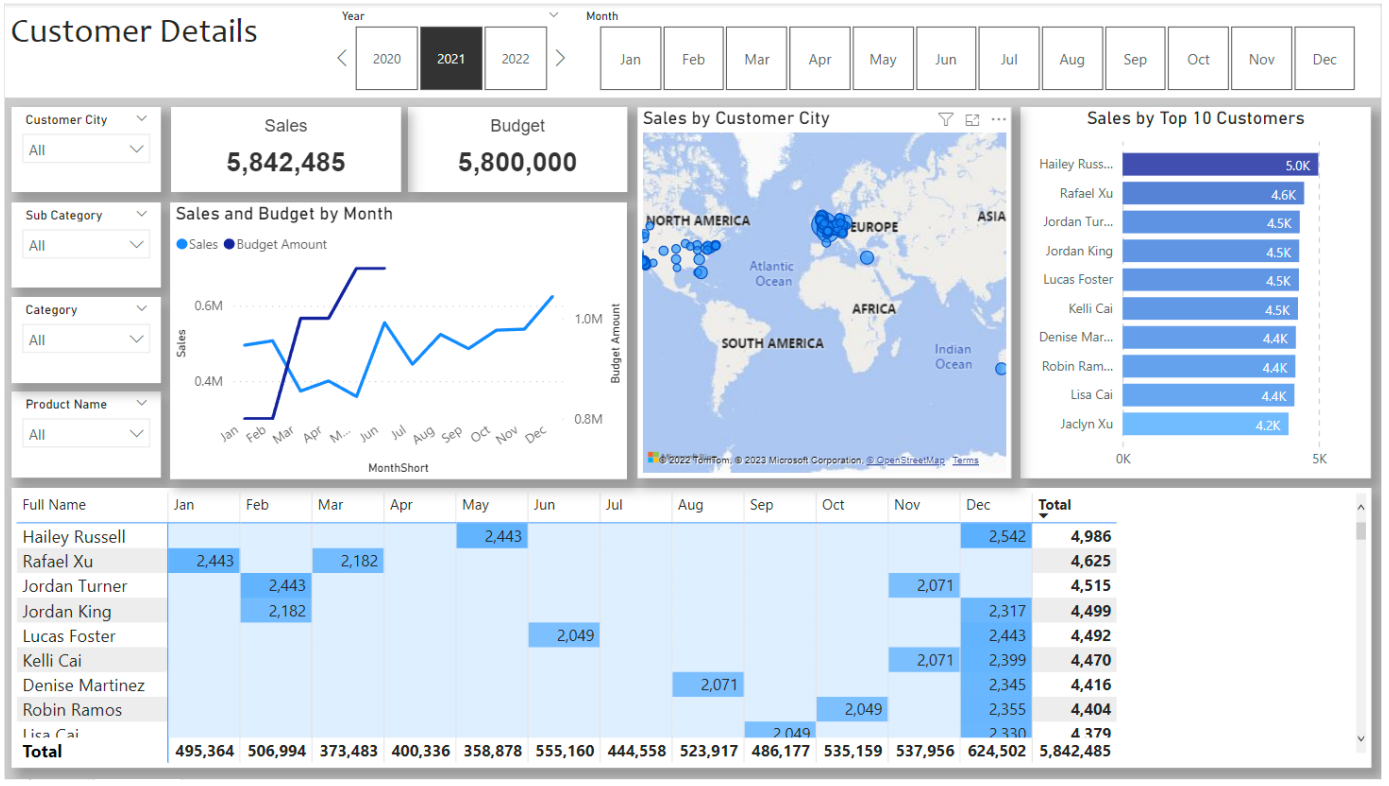
Data Model

Below is a screenshot of the data model after being cleaned. Then prepared tables were loaded into Power BI



Sales Management and Customer Details Dashboards





Full Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Hailey Russell					2,443							2,542	4,986
Rafael Xu	2,443		2,182										4,625
Jordan Turner		2,443									2,071		4,515
Jordan King		2,182										2,317	4,499
Lucas Foster						2,049						2,443	4,492
Kelli Cai											2,071	2,399	4,470
Denise Martinez								2,071				2,345	4,416
Robin Ramos										2,049		2,355	4,404
Lisa Cai									2,049			2,330	4,379
Total	**495,364**	**506,994**	**373,483**	**400,336**	**358,878**	**555,160**	**444,558**	**523,917**	**486,177**	**535,159**	**537,956**	**624,502**	**5,842,485**