BUDGET SALES ANALYSIS

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1. Problem Statement:

Our "Domain Sale" process is structured to help potential buyers purchase the domain they want immediately without the hassle of contacting the seller directly.

A seller lists a domain for sale at a specific price in our Marketplace. An interested buyer sees this domain for sale and decides to buy it.

2. Objectives:

- The collection includes records for sales orders, customer information, product information, and geographical data.
- In order to deduce important metrics and patterns in the dataset, this project will use the provided data to perform ETL and data analysis.
- Additionally, several visualizations and reports are created to represent significant linkages.

3. Benefits

- Help in making wiser business decisions.
- Aid in customer satisfaction and trend monitoring, which can serve current consumers and attract new ones.
- Greater client base understanding is provided.
- Facilitates seamless resource management flow.

4. Data attributes

CustomerKey	HouseOwnerFlag
FullName	NumberCarsOwned
Birthdate	DateFirstPurchase
Maritalstatus	CommuteDistance
Gender	**Customer**
YearlyIncome	
TotalChildren	
NumberChildren AtHome	
Education	
Occupation	

Product	
ProductKey	ListPrice
ProductName	DaysToManufacture
Subcategory	ProductLine
Category	ModelName
ProductDescription	StartDate

ProductKey	OrderDate
CustomerKey	ShipDate
PromotionKey	SalesAmount
SalesTerritoryKey	OrderQuantity
SalesOrderNumber	**Sales**
SalesOrderLineNumber	
UnitPrice	
TotalProductCost	
TaxAmt	

Territory
SalesTerritoryKey
Region
Country
Group

Dataset information

- **CustomerKey:** Primary key for customer dataset
- **Birthdate:** Birthdate of the customer
- **MaritalStatus:** M- Married / S - Single
- **Gender:** M – Male / F – Female
- **TotalChildren:** Total number of children
- **NumberChildrenAtHome:** Number of children staying along with their parents
- **Education:** Education qualification
- **Occupation:** Present occupation
- **HouseOwnerFlag:** 1– Owns house / 0- Doesn't have a permanent address
- **NumberCarsOwned:** Number of cars owned by the customer
- **DateFirstPurchase:** First date of order by the customer
- **ProductKey:** Primary Key for the product dataset
- **ProductName:** Product name with colour of the product
- **Subcategory:** Sub category name of the product
- **Category:** Category name of the product
- **ListPrice:** Sale price of the product
- **DaysToManufacture:** Days to manufacture the product after receiving the order
- **ProductLine:** Product line name
- **ModelName:** Model name of the product
- **ProductDescription:** more details about the product
- **SalesTerritoryKey:** Primary Key of the Territory dataset
- **Region:** Region name of the order
- **Country:** Country name of the order
- **OrderDate:** Date of the order received
- **ShipDate:** Date when the order left the factory for export
- **SalesOrderNumber:** Invoice number of the order
- **OrderQuantity:** Number of quantities ordered for a product
- **UnitPrice:** Per unit sale price of the product
- **TotalProductCost:** Cost of the product
- **SalesAmount:** Total sales price of the product
- **TaxAmt:** Tax collected for the product sold

5. Architecture

1. Collect Raw Data - This step involves extracting the data from different sources relevant to the problem statement or obtaining data from the client.

2.Data Wrangling – Contains following steps gathering data, assessing data, handling missing data and adding columns.

3.Exploring Data – Once the data is loaded and pre-processed, we preform data analysis using python libraries and Business Intelligence tools like Power BI.

4.Data Modelling - Data Modelling is one of the features used to connect multiple data sources in BI tool using a relationship.

A relationship defines how data sources are connected with each other and you can create interesting data visualizations on multiple data sources.

5.Deployment - The prepared visualizations are deployed on the powerbi.microsoft.com site. Where they will be available publicly

6. Insights

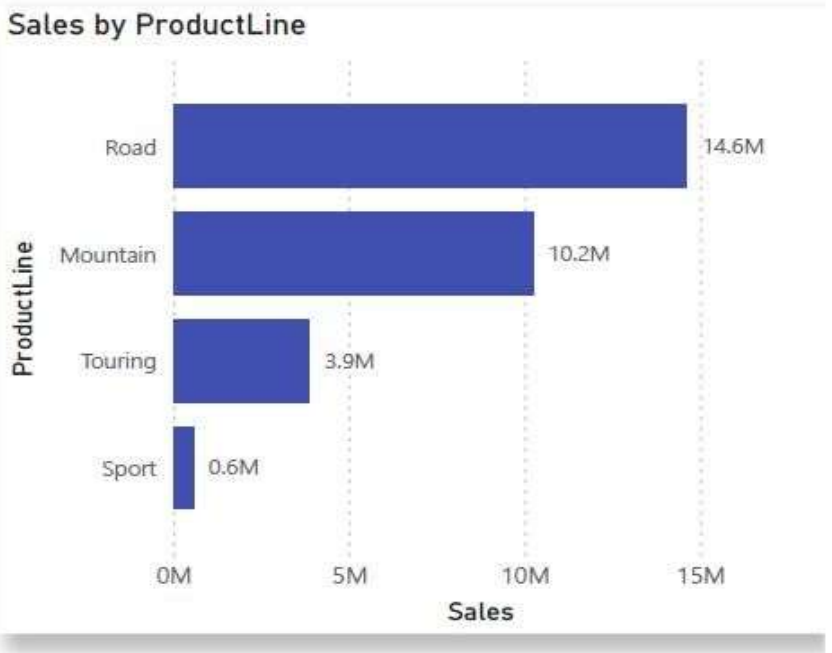
- Sales Dashboard
- Profit Analysis Dashboard
- Variance Analysis Dashboard
- Customer Analysis Dashboard

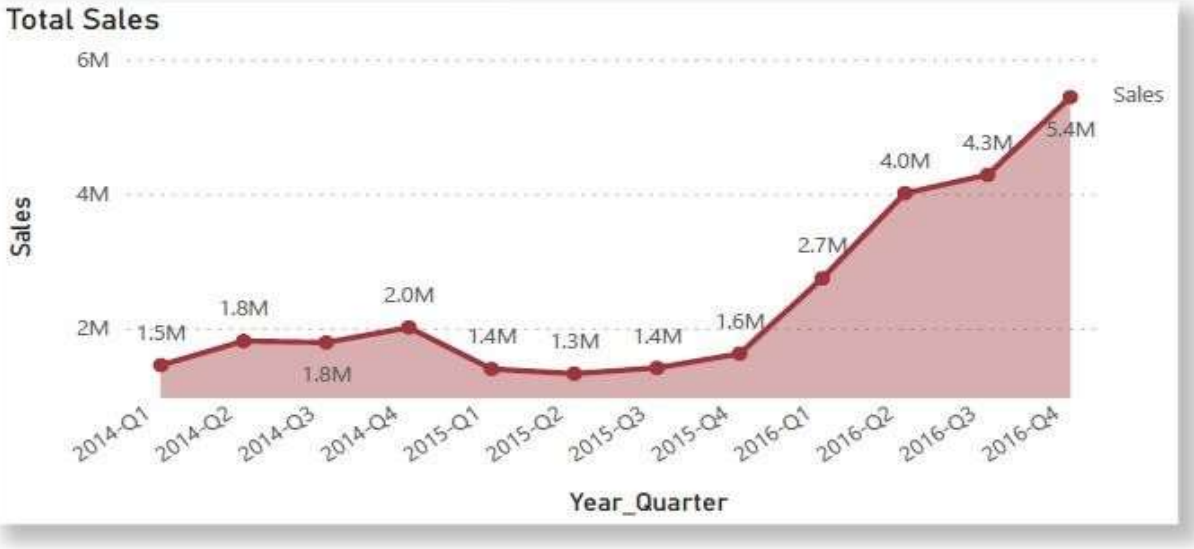
Sales Dashboard

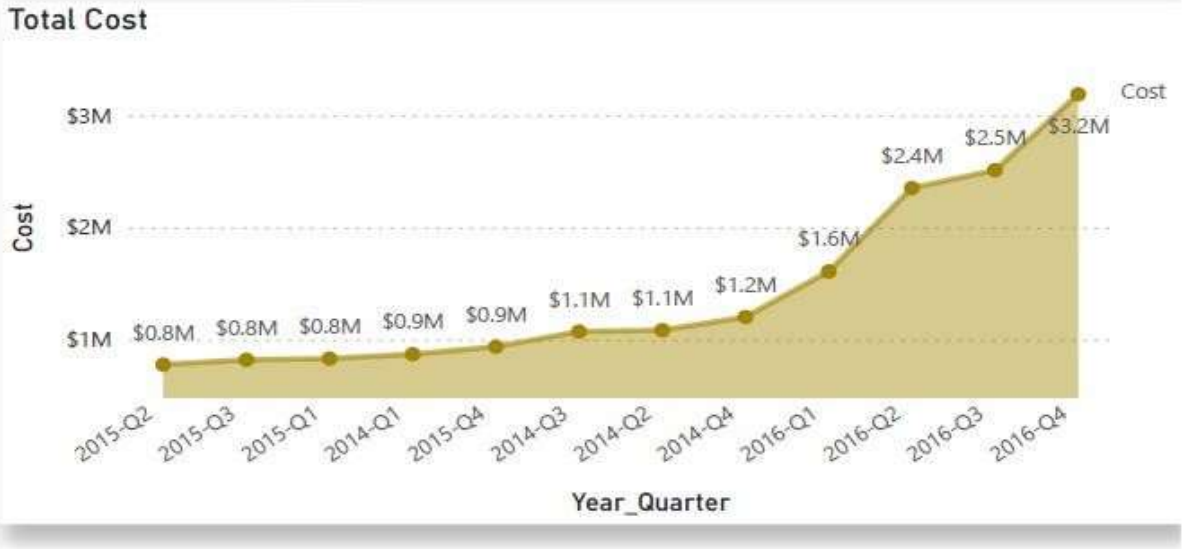
2014 | 2015 | 2016

$17.26M
Cost

31.65M
TotalSales





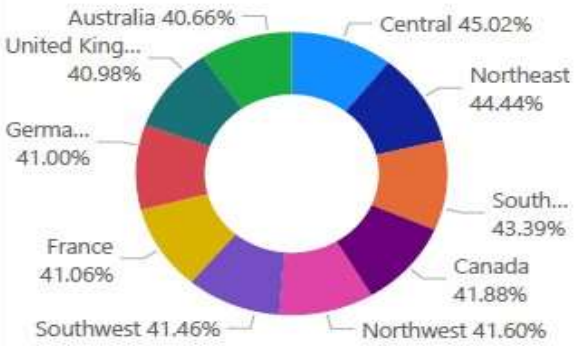


Profit Analysis Dashboard

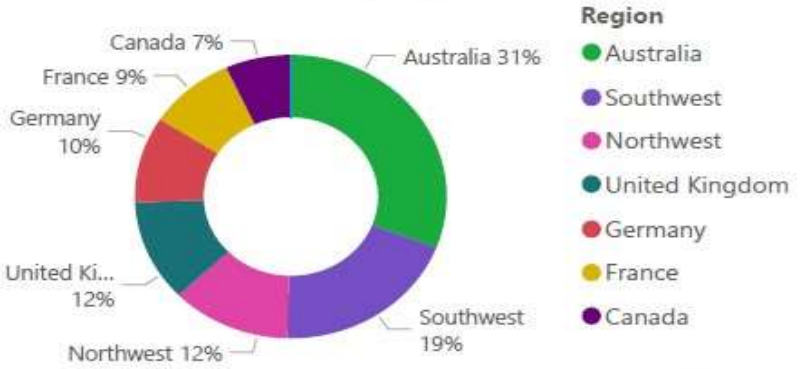
12.05M	41.12%	29.31M	91K
Total Profit	Profit Margin %	Revenue	Total Orders

Year: 2014, 2015, 2016

Profit Margin % by Region

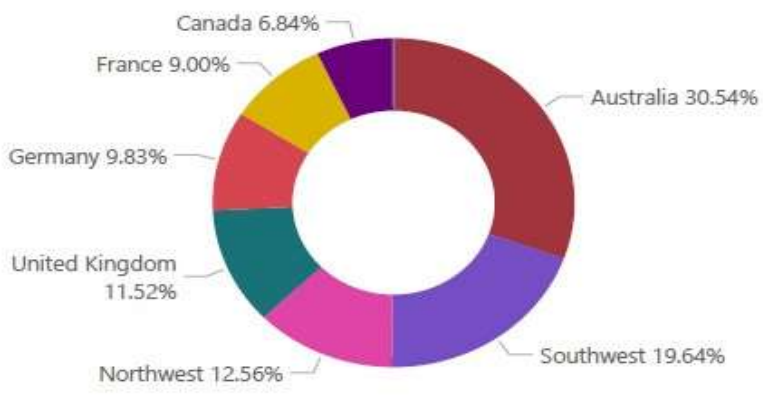


Revenue contribution % by Region



CY Profit margin and Diff in profit margin compared to LY

Profit margin contribution % by Region



LastName	Revenue	Profit Margin %	Profit margin contribution %	LAST YEAR REVENUE	Cost
Xu	3,09,520.15	40.70%	1.05%	1,35,404.63	$1,
Martinez	3,05,853.26	40.80%	1.04%	1,39,623.95	$1,81,057.
Gonzalez	3,01,610.67	40.90%	1.02%	1,27,043.01	$1,78,241.
Diaz	3,00,529.42	41.36%	1.03%	1,22,557.00	$1,
Sanchez	2,98,984.63	41.44%	1.03%	1,28,652.85	$1,75,093.
Hernandez	2,97,215.60	41.18%	1.02%	1,13,554.35	$1,74,834.
Garcia	2,86,485.33	40.84%	0.97%	1,31,233.24	$1,69,481.
Torres	2,68,057.16	40.93%	0.91%	1,10,435.83	$1,58,336.
Perez	2,68,040.11	41.10%	0.91%	1,18,999.96	$1,57,867.
Total	**2,93,07,836.59**	**41.12%**	**100.00%**	**1,28,34,218.54**	**$1,72,55,31**

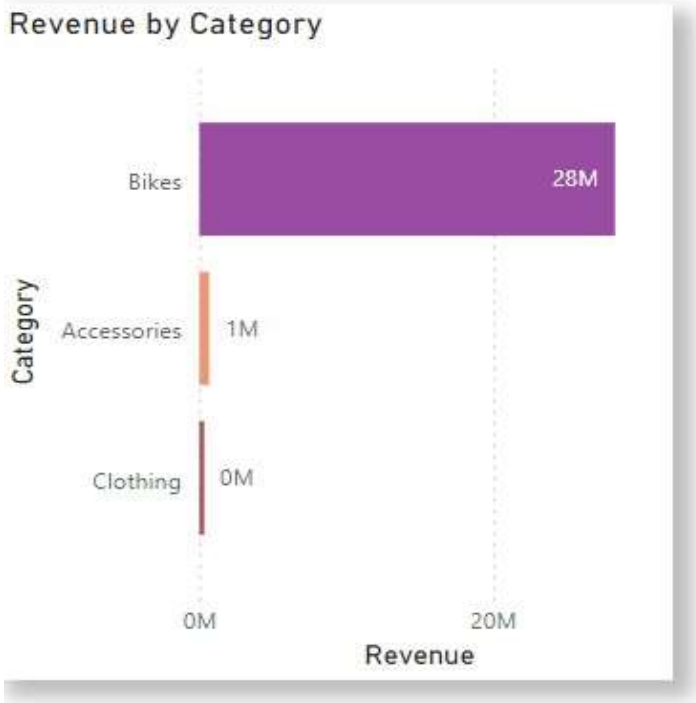
Variance Analysis Dashboard

2014 | 2015 | 2016

12.44M
Variance

0.74
Variance %

Sales by Category & Variance to Target



Product Sales & Variance to target

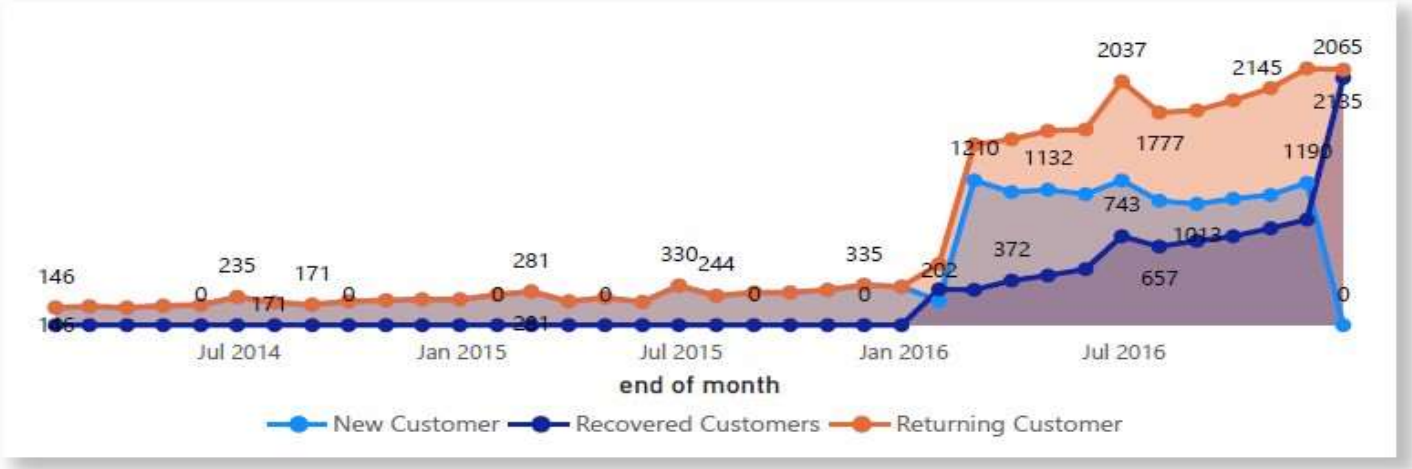
Category	Sales	Target sales	Variance	Variance %
Accessories	**6,67,015.32**	**687607**	**-20,591.68**	**-0.03**
Bike Racks	36,960.00	36861	99.00	0.00
Bike Stands	37,842.00	38757	-915.00	-0.02
Bottles and Cages	55,030.81	57369	-2,338.19	-0.04
Cleaners	6,868.80	6465	403.80	0.06
Fenders	44,267.72	43670	597.72	0.01
Helmets	2,15,923.29	221905	-5,981.71	-0.03
Hydration Packs	38,822.94	39803	-980.06	-0.02
Tires and Tubes	2,31,299.76	242777	-11,477.24	-0.05
Bikes	**2,83,18,144.65**	**15848226**	**1,24,69,918.65**	**0.79**
Mountain Bikes	99,52,759.56	6534364	34,18,395.56	0.52
Road Bikes	1,45,20,584.04	5257897	92,62,687.04	1.76
Touring Bikes	38,44,801.05	4055965	-2,11,163.95	-0.05
Clothing	**3,22,676.62**	**333741**	**-11,064.38**	**-0.03**
Caps	18,834.05	20371	-1,536.95	-0.08
Gloves	33,379.87	33965	-585.13	-0.02
Jerseys	1,65,066.21	170938	-5,871.79	-0.03
Shorts	67,050.42	68453	-1,402.58	-0.02
Socks	4,881.57	5449	-567.43	-0.10
Vests	33,464.50	34565	-1,100.50	-0.03
Total	**2,93,07,836.59**	**16869574**	**1,24,38,262.59**	**0.74**

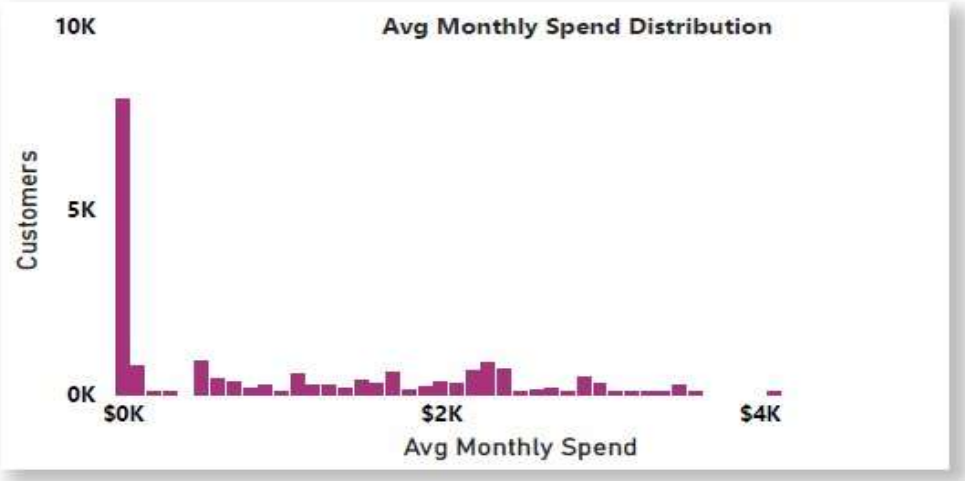
Customer Analysis Dashboard

2014 | 2015 | 2016

Average Spend | Customers | Customers Retained %

Customer Retention





7. Key Performance Indicator

- Sales trend line
- Cost trend line
- Average unit cost and price
- Revenue generated by Subcategory
- Sales by Product Line
- Revenue contribution by region
- Profit contribution by region
- Profit % by region
- Profit % by region
- Current year profit margin vs difference in last year's profit margin
- Total orders
- Total revenue
- Variance to target comparison by category
- Variance by month line chart
- Customer retention line chart
- Monthly spending trend
- Average monthly spend distribution

8. Conclusion

- The year 2016 saw an exponential surge in sales .
- High quantity of products is ordered from Australia.
- Major Profit is contributed by the Bike Category.
- Client retention in 2014 was subpar
- 2016 brought about a slight improvement in retention.
- Average Monthly spend by customers is below $100 .

Q&A

Q1) What's the source of data?

➢ The Dataset was taken from Unified Mentor's Provided Project Description Document.

Q2) What was the type of data?

➢ The data was the combination of numerical and Categorical values.

Q 3) What's the complete flow you followed in this Project?

➢ Refer Architecture for better Understandings

Q4) What techniques were you using for data?

➢ Removing unwanted attributes

➢ Visualizing relation of independent variables with each other

➢ Cleaning data by removing column with missing values

➢ Converting Numerical data into Categorical values