**1.Key Findings from Customer Segmentation:**

1. **Gender Distribution:**

Female customers: 2,039 (51%)

Male customers: 1,873 (47%)

Unknown gender: 88 (2%)

1. **Wealth Segment Distribution:**

Mass Customers: 2,000 (50%)

High Net Worth Customers: 1,021 (25.5%)

Affluent Customers: 979 (24.5%)

1. **Job Industry Distribution:**

**Top 3 industries:**

Manufacturing: 799 customers (20%)

Financial Services: 774 customers (19.4%)

Health Industry: 602 customers (15%)

656 customers (16.4%) have an Unknown job industry.

1. **Car Ownership:**

Yes: 2,024 customers (50.6%)

No: 1,976 customers (49.4%)

1. **Wealth Segment Analysis:**

**Affluent Customers (979)** have an average tenure of 10.5 years.

**High Net Worth (1,021)** customers have the highest average tenure (10.74 years).

**Mass Customers (2,000)** have an average tenure of 10.68 years, slightly lower than HNWIs.

1. **Gender-Based Purchase Behaviours:**

**Females (2,039 customers)** have an average of 48.24 bike-related purchases in the past 3 years.

**Males (1,873 customers)** have a slightly higher average of 49.91 purchases.

**Unknown gender group (88 customers)** has the lowest average at 42.25 purchases.

1. **Job Industry Distribution Across Wealth Segments:**

**Agriculture:** Majority are Mass Customers (54 out of 113).

**Entertainment:** Spread across all wealth segments, with Mass Customers (71 out of 136) dominating.

**2**. **Key Insights from transaction analysis.**

1. **Transaction Summary**

**Transaction Count**: 20,000 transactions recorded.

**Time Period**: January 1, 2017, to December 30, 2017.

**Online Orders**: Around 49% of the transactions were online.

**Top Brands: Solex** was the most frequently purchased brand.

**Average List Price**: 1107.83 with a range from 12.01 to 2,091.47.

**Product Size & Class**: Medium-sized products and medium-class products dominated the transactions.

2. **Sales Trend Analysis**

**Stable Trend**: Monthly sales figures remained relatively consistent throughout the year.

**Total Sales**: High sales figures were maintained each month, with some drastic fluctuations in October month.

3. **Product Performance Analysis**

**Top Brands**:

Giant Bicycles led with 4,091,668.66 in sales.

Norco Bicycles and OHM Cycles followed with 2,657,419.13 and 2,993,420.35 respectively.

**Product Line Performance**:

Standard product line generated the highest total sales of 15,634,943.96.

Road products had the highest average sales per item (1,018.02), while Mountain products had relatively lower sales

4. **Customer Purchase Behaviours**

**Top Customers**:

Customer ID 2183 contributed the highest transactional value of $19,071.32.

Customer ID 1129 followed closely with $18,349.27.

**Purchase Frequency**:

Average number of purchases per customer was 5.72, with some high-frequency buyers making up to 11 purchases.

**3. Key Findings from new customer insights:**

1. **Demographics:**

The majority of new customers come from the Financial Services, Manufacturing, and Health industries.

Affluent Customers (241 total) and High Net Worth Customers (251 total) are the largest customer groups.

Retail and Telecommunications contribute fewer customers.

2. **Average Bike Purchases:**

Average bike-related purchases over the past 3 years:

Affluent Customers: ~49.81 purchases.

High Net Worth Customers: ~50.66 purchases.

Mass Customers: ~49.44 purchases.

3. **Correlation Map**:

Positive correlation exists between customer wealth segments and average property valuation:

Affluent Customers: 7.16

High Net Worth: 7.57

Mass Customers: 7.42

**4. Potential Revenue:**

Potential revenue from bike-related purchases: (Assuming the currency is in USD)

Affluent Customers: ~$2.51M

High Net Worth Customers: ~$2.83M

Mass Customers: ~$11.29M

**Mass Customers contribute significantly more to potential revenue.**

5. **State Distribution:**

The maximum new customers are from **New South Wales (506)** followed by **Victoria (266)** and **Queensland (228).**

**These insights highlight that Mass Customers, despite lower average purchases, drive the highest potential revenue. Additionally, High Net Worth customers show higher property valuations, which may indicate more purchasing power.**

**4. Key findings from CLV (Customer Lifetime Value)**

**1. Customer Lifetime Value (CLV) Calculation**

**CLV is calculated for individual customers using the following formula:**

CLV = {Average Purchase Value} \*{Purchase Frequency} \*{Customer Lifespan}

Customer ID: Unique identifier for each customer.

Sample Data:

**Customer 1:**

Total Revenue: 9084.45

Number of Purchases: 11

Customer Lifespan: 11 years

Average Purchase Value: 825.86

Purchase Frequency: 0.0031

CLV: 28.60

**Customer 3:**

Total Revenue: 9888.23

Number of Purchases: 8

Customer Lifespan: 15 years

Average Purchase Value: 1236.03

Purchase Frequency: 0.0023

CLV: 42.45

**2. Average CLV by Wealth Segment**

This segment customers based on their Wealth Category and calculates the average CLV for each group.

Findings:

Mass Customer: Average CLV is 19.55, indicating a moderate customer value.

High Net Worth: Average CLV is 19.28, slightly lower than the mass customer group.

Unknown Wealth Segment: Average CLV is only 4.65, suggesting that customers with unclassified wealth contribute less revenue and transactions.

Mass and High Net Worth customers show almost equal CLV, but customers with unknown wealth classification are less valuable, indicating the need for better classification.

**3. Average CLV by Gender**

This groups customers by gender and calculates the average CLV for each.

Findings:

Female: Average CLV is 19.16, slightly lower than male customers.

Male: Average CLV is 19.48, marginally higher than female customers.

Unknown Gender: Average CLV is 21.45, which is higher than both identified genders.

The higher CLV for unknown gender could be due to incomplete or missing demographic data, suggesting a need for data improvement.

Both male and female customers contribute almost equally, indicating balanced customer engagement.

**4. Average CLV by Job Industry**

This breaks down the average CLV based on the job industry of the customer.

Findings:

**Entertainment**: Highest CLV at 20.58, indicating that customers in this industry generate higher revenue and have a longer lifespan.

**Financial Services**: CLV of 18.81, reflecting steady customer engagement.

**Agriculture**: Lowest CLV at 18.48, suggesting lower revenue and engagement.

The Entertainment sector stands out, suggesting opportunities for further marketing and engagement in that industry.

Industries with lower CLV may require tailored marketing strategies to improve customer retention and value.