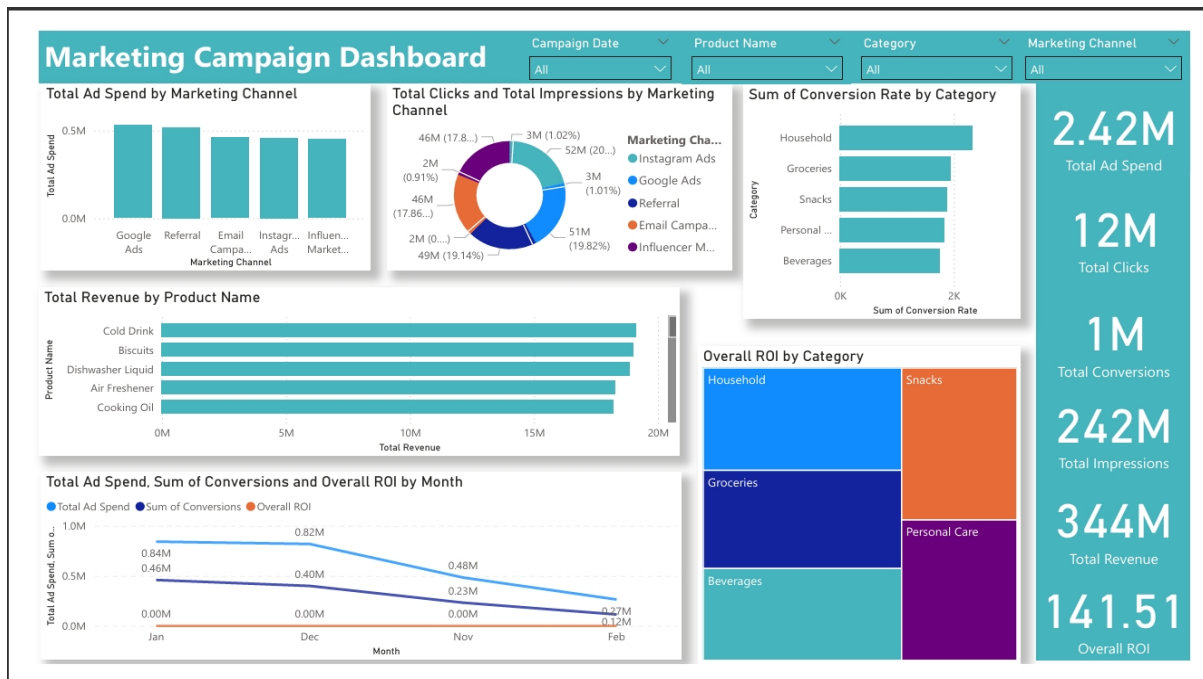# POWER BI MARKETING PERFORMANCE DASHBOARD

1. Project Objective

As a data analyst in a digital marketing team, the goal was to create a fully interactive Power BI dashboard that monitors campaign performance across multiple marketing channels.

The dashboard needed to:

• Display high-level KPIs.

• Allow deep exploration of campaign performance by channel, product, category and date.

 • Present clear, actionable visuals to guide future optimization strategies.

2. Understanding the Requirements

The dashboard requirements provided included:

• KPIs: Total Ad Spend, Impressions, Clicks, Conversions, Revenue, and ROI.

• Visuals: Charts for channel performance, conversion rates, ROI comparisons, and trends over time.

• Interactivity: Slicers for filtering by date, product, category, and channel.

• DAX Measures: CTR, Conversion Rate, and ROI.

• Design Standards: Clean layout, consistent colors, professional look.

3. Data Preparation

- Load PBI_Marketing_Data.xlsx (sheet: marketing)

-Ensure correct data types (numeric/date)

3.1 Data Import

The dataset was imported into Power BI Desktop. The file contained the following key columns:

 • Campaign ID

 • Campaign Date

• Marketing Channel

• Product Name

 • Category

• Ad Spend

• Impressions

• Clicks

• Conversions

• Revenue

• ROI (existing in the dataset, later cross-checked with calculated ROI)

3.2 Data Cleaning

• Removed null or duplicate campaign entries.

• Verified consistent naming for channels and categories.

• Checked for outliers in spend and revenue values.

4. Dax Measures

To standardize KPIs, calculated measures were created:

Total Ad Spend = SUM('marketing'[Ad Spend])

Total Impressions = SUM(' marketing '[Impressions])

Total Clicks = SUM(' marketing '[Clicks])

Total Conversions = SUM(' marketing '[Conversions])

Total Revenue = SUM(' marketing '[Revenue])

Profits Revenue – Ad spend Total Profits Total Profits = SUM(' marketing '[Profits])

CTR (Click-Through Rate) = DIVIDE([Total Clicks], [Total Impressions], 0)

Conversion Rate = DIVIDE([Total Conversions], [Total Clicks], 0)

Overall ROI (Return on Investment) = DIVIDE(([Total Revenue] - [Total Ad Spend]), [Total Ad Spend], 0)

Notes:

• DIVIDE() was used instead of / to handle division by zero.

• ROI was expressed as a decimal but formatted as a percentage.

5. KPI Card Visuals

- Total Ad Spend

- Total Impressions

- Total Clicks

- Total Conversions

- Total Revenue- ROI (%)

6. Visuals

- Ad Spend by Channel -> Clustered Column Chart

- Clicks vs Impressions -> Donut Chart

- Conversion Rate by Category -> Bar Chart

- Revenue by Product -> Bar Chart

-ROI by Product/Category -> Tree Map

-Time-based Trends (Spend, Conversions, ROI, Clicks) -> Line Chart

7. Slicers

- Campaign Date

- Product Name

- Product Category

- Marketing Channel

8. Key Insights (Findings)

8.1 Marketing Channel Performance

• Google Ads had the highest spend (₦529.9K), followed closely by Email Campaigns and Instagram Ads.

• The overall Click-Through Rate is 4.84%, meaning only about 5 out of every 100 people who see the ad click on it.

• Most campaign impressions (95%) do not result in clicks, showing we have room to improve engagement.

8.2 Top Revenue Products

• Cold Drink is the top earner at ₦19.1M, with Biscuits (₦19.0M) and Dishwasher Liquid (₦18.9M) close behind.

• The top 5 products span both food/beverage and household goods, showing diversity in strong performers.

8.3 Conversions by Category

• Household products lead with 309K conversions, followed by Groceries (251K) and Snacks (223K).

• Beverages and Personal Care still perform well, but at slightly lower levels.

8.4 ROI by Category

• Household and Personal Care deliver the best ROI, meaning they return more profit for each Naira spent.

• Beverages and Snacks generate good revenue but offer lower profitability per spend.

8.5 Trends Over Time

• January and December had the highest spending, likely linked to seasonal campaigns.

• February saw a sharp drop in spend and possibly missed opportunities for conversions.

• ROI patterns fluctuate alongside ad spend, showing that timing of spend matters.

9. Overall Campaign Health from January to December:

• Total Ad Spend: ₦2.42M

• Total Impressions: 242M

• Total Clicks: 12M

• Total Conversions: 1M

• Total Revenue: ₦344.33M

• Overall ROI: 141.51% — meaning we earned back our investment spend plus an extra 141% profit.

10. Recommendations

1. Focus on High-ROI Categories: Increase marketing for Household and Personal Care products since they give better returns.

2. Improve CTR: Test new creatives, targeting, and ad formats to increase clicks beyond the current 4.84%.

3. Optimize Spend Timing: Spread spend more evenly throughout the year instead of concentrating too heavily in January and December.

4. Re-evaluate Low-ROI Categories: Consider reducing spend on Beverages and Snacks or improving their marketing strategies.

5. Double Down on Top Products: Cold Drink, Biscuits, and Dishwasher Liquid are consistently high revenue earners; these should get strong marketing priority.