

Business Requirements Document

Meta Ad Performance Analysis

Business Objective:

The business needs a performance tracking report for advertising campaigns running on Facebook and Instagram. The report will provide visibility into campaign reach, engagement, conversions, and budget utilization.

This will enable the marketing team to:

- Identify the most effective platform (Facebook vs Instagram).
- Track campaign ROI and optimize budget allocation.
- Understand audience engagement patterns.

Scope of the Report:

- In Scope: Campaigns running on Facebook and Instagram only.
- Out of Scope: Other platforms (Messenger, Audience Network), Organic engagement (only paid ads will be included).

KPIs and Definitions:

KPI	Definition	Formula	Example Use
Impressions	Number of times ads were displayed.	Count of event_type = Impression	Measure reach
Clicks	Number of times users clicked ads.	Count of event_type = Click	Measure engagement
Shares	Number of times ads were shared.	Count of event_type = Share	Viral engagement
Comments	Number of user comments on ads.	Count of event_type = Comment	User sentiment & feedback
KPI	Definition	Formula	Example Use
Purchases	Number of purchases made after seeing the ad.	Count of event_type = Purchase	Conversions
Engagement	Total interactions (Clicks + Shares + Comments).	Clicks + Shares + Comments	Measure user engagement

KPI	Definition	Formula	Example Use
CTR (Click Through Rate)	% of impressions that resulted in clicks.	$(\text{Clicks} \div \text{Impressions}) \times 100$	Ad effectiveness
Engagement Rate	% of impressions that led to engagement.	$(\text{Engagement} \div \text{Impressions}) \times 100$	Overall ad appeal
Conversion Rate	% of clicks that resulted in purchases.	$(\text{Purchases} \div \text{Clicks}) \times 100$	Budget efficiency
Purchase Rate	% of impressions that resulted in purchases.	$(\text{Purchases} \div \text{Impressions}) \times 100$	Conversion strength
Total Budget	Total budget spent on campaigns.	Sum of total_campaign_budget	Cost analysis
Avg. Budget per Campaign	Average budget allocation per campaign.	$\text{Total Budget} \div \text{Number of Campaigns}$	Budget distribution

Charts Requirements:

1. Target Gender – Donut Chart

A donut chart will visualize performance split by target gender (from the ads table).

- The metric displayed (e.g., Impressions, Clicks, Purchases) will change dynamically via the parameter.
- Purpose: Identify which gender segment contributes most to the selected metric.

2. Target Age Group – Bar Chart

A bar chart will show engagement across age groups defined in the ads table.

- Each bar will represent one age group.
- The metric displayed will switch dynamically.
- Purpose: Highlight which age group is most responsive to campaigns.

3. Country – Map

A map visualization will display performance by country (from the users table).

- Bubble size or color intensity will represent the selected metric.
- Purpose: Provide a geographic view of campaign reach and engagement.

4. Calendar Month – Calendar Heat Map

A calendar heat map will plot performance at the monthly level, based on the timestamp

field in ad_events.

- Darker shades will indicate higher activity.
- Purpose: Detect seasonal trends, peak ad months, and low-activity periods.

5. Weekly Trend – Stacked Column by Ad Type

A stacked column chart will display weekly performance trends.

- X-axis → Week number (from the Date Table linked to ad_events).
- Stacks → Different ad_type values (from the ads table).
- Y-axis → Selected metric.
- Purpose: Compare ad type contributions over weeks.

6. Hourly Trend – Area Chart

An area chart will show activity by hour of day (from ad_events[time_of_day]).

- X-axis → Hour of the day (0–23).
- Y-axis → Selected metric.
- Purpose: Understand user activity patterns throughout the day.

7. Ad Type – Matrix

A matrix visualization will show the selected metric across ad types and possibly break down further by platform (Facebook vs Instagram).

- Rows → Ad Types.
- Columns → Platforms or other campaign dimensions.
- Values → Selected metric.
- Purpose: Compare performance