



Assignment - 4

Decision Strategies and Outcome Evaluation

Programme :- BCA (AI & DS) Hons. with research

Section :- 'C'

Semester :- I

Course :- Foundation of Data - Driven Decision Making

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Task - I

Business Scenario : Local electronics retailer wanting to increase monthly revenue and improve marketing ROI.

KPIs :-

- (1) Monthly Revenue (₹) - total sales value per month.
Why : primary business objective; easy to measure and track.
- (2) Online Conversion Rate (%) - (number of purchases from website ÷ website sessions) × 100
Why : indicates how well website traffic converts to sales; guides digital marketing and UX improvements.
3. Average Order Value (AOV) (₹) - total revenue ÷ number of orders.
Why : increasing AOV is a fast way to raise revenue without acquiring new customers.
4. Customer Acquisition Cost (CAC) (₹) - total marketing spend ÷ number of new customers acquired in a period.
Why : measures marketing efficiency and helps decide budget allocation.

Task 2

Data - Driven decision plan

1. Data Sources -

- POS System (daily sales, items sold, AOV).
- website analytics (sessions, traffic sources, conversion events).
- marketing platform (ad spend by channel - Google, Instagram, WhatsApp ad spends).
- Customer records (email / phone for repeat purchase analysis).

2. Measurement & baseline

- Collect last 6 months of Monthly Revenue, AOV, website sessions and conversions to calculate current averages and variation.
- Compute baseline KPIs : mean revenue, mean conversion rate, CAC.

Justification - A 6-month baseline smooths seasonality and gives realistic targets.

3. Targets (SMART)

- Increase monthly revenue by 15% within 3 months.
- Improve online conversion rate by 1.5 percentage points in 3 months.

- Reduce CAC by 10% within 3 months

Justification - Specific, measurable, time bound focuses efforts and allow evaluation.

4. Interventions :-

- Paid Search & Social A/B tests: Shift spend toward best-performing channels after 4 weeks of data.
why: quickly improves CAC and traffic quality.
- Website UX fixes: Simplify checkout, add trust signals, display cross-sell suggestions to lift conversion and AOV.
why: conversion increases and higher AOV increases revenue with same traffic.
- Bundled offers: Create product bundles to raise AOV (e.g. TV + basic Wall-mount + setup service).
why: bundles increase perceived value and order size.

5. Analytics & tools:-

- Use Google Analytics (or simple server logs) for traffic & conversions.
- Use spreadsheets or simple BI (Supabase/GSheets + charts) for KPI dashboards.
- Track Spend vs. revenue by channel weekly.

Justification : Use low-cost tooling first to iterate quickly.
dashboards make trends visible.

Task - 3

Methods to track & evaluate performance

Weekly loop (operational)

- Monitor : weekly dashboard with revenue, conversion rate, AOV, CAC by channel.
- Analyze : identify underperforming channels and pages.
- Act : reallocate 20% of underperforming ad spend to top-performing channel; deploy quick UX fixes.
- Review : check impact next week.

Monthly loop (Strategic)

- Measure : month-over-month KPI comparison, cohort analysis for new vs returning customers.
- Hypothesize : why a KPI rose or fell (e.g., campaign change, stockout, price change).
- Experiment : run a 4 week A/B test.
- Decide : scale winning variant ; document learnings.

Task 4

Objective: Increase monthly revenue by 15% and improve marketing ROI over the next 3 months by optimizing digital marketing, improving website conversion, and increasing average order value.

Key KPIs.

- Monthly Revenue (₹) - primary success metric.
- Online Conversion Rate (%) - measures website effectiveness.
- AOV (₹) - Increases revenue per transaction.
- CAC - measures marketing efficiency.

Baseline & Targets

- Baseline (6-months average):
Monthly Revenue = Current Average.
Conversion Rate = Current average;
CAC = current average
- Targets (3 months):
Revenue + 15%, Conversion Rate + 1.5 pp, CAC - 10%.

Tracking & Feedback

- Weekly dashboard with revenue, conversion, AOV, CAC; operational reallocation of ad budget.
- Monthly strategic review with experiment log and A/B cohort analysis.
- Continuous data quality checks and experiment documentation.