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M.R. MANGALAM UNIVERSITY

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PROGRAM - BCA [AI & DS]

COURSE NAME - DATA DRIVEN DECISION
- ON MAKING.

ASSIGNMENT - 4

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SECTION - D

Assignment - 4

TASK

Choose a business scenario (Marketing , operation or education) and define 3-4 KPIs to measure success

A Company launches a digital Marketing Campaign, to promote a new product online . The goal is to increase brand awareness attract potential customers, and boost online sales, to evaluate, the success of the campaign , Specific key performance indicators are defined.

1. CONVERSION RATE :

> Definition : The percentage of website visitors who take a desired action (such as making a purchase or signing up)

> formula :

$$\text{Conversion rate} = \frac{\text{No. of Conversions}}{\text{Total Visitors}} \times 100$$

2. Click - Through Rate :

> Definition : The percentage of people who clicked on the ad or promotional link like after seeing it.

> formula :

$$\text{click-through rate} : \frac{\text{Clicks}}{\text{Impressions}} \times 100$$

3. Customer Acquisition Cost (CAC) :

> Definition : The total cost spent on acquiring one new customer through the campaign.

> formula :

$$\text{Customer Acquisition} = \frac{\text{Total marketing cost}}{\text{Number of New Customers}}$$

4. Return on Marketing Investment (ROMI) :

> Definition : Measure the overall profitability generated from the marketing campaign

> formula :

$$\text{Return on Marketing} = \frac{\text{Revenue from Campaign} - \text{Marketing Cost}}{100 \times \frac{\text{Marketing Cost}}{\text{Marketing Cost}}}$$

Task 2 :

Develop a data-driven decision plan using available information and justify your choices.

Q Scenario:

A retail store wants to improve its monthly sales and customer satisfaction using data-driven decision making.

∴ Step 1:

Collect Available Data : The store collects data from different sources such as:

- Monthly sales reports
- Customer feedback surveys
- Website traffic and online purchase records
- Inventory and product return details.

∴ Step 2:

Analyze the data : Using charts and reports, the store identifies:

- Which products sell the most.
- Which months have low sales.
- Common customer complaints or preferences.

∴ Make Data - Driven Decision:

Based on insight , the store decide to :

- Increase stock for high- demand items during Peak months.
- Offer discount or promotions in low- Sales periods
- Improve Customer Service in area where feedback is poor.

∴ Measure Result using KPIs:

The store tracks the success of its plan using key metric like:

- Monthly Sales growth
- Customer Satisfaction Score
- Repeat Purchase rate.

Justification:

These decisions are based on actual data rather than assumption . This ensures resources are used effectively , helps meet Customer needs , and improve overall profit . Data - Driven planning reduces guesswork and Support Continuous improvement through measurable outcomes.

TASK 3:

Suggest method to track and evaluate performance over time using feedback loops.

A good method to track and evaluate performance over time is by using feedback loops.

Feedback loops collect regular responses from employees, customers or systems to measure progress and identify areas for improvement.

for Example :

1. Collect feedback through surveys, performance report or customer reviews.
2. Analyze data to find trends, strengths, and weaknesses.
3. Implement changes based on the feedback to improve results.
4. Monitor outcomes again to see if the changes were effective.

This continuous cycle of feedback and improvement helps maintain consistent performance, support data-driven decision and ensures long-term growth and efficiency.

Prepare a one-page executive summary highlights your insights and recommendations.

3) This report analyzes data from a sample business scenario to understand trends, performance, and opportunities for improvement. The study used different visualization such as bar charts, histogram, and scatter plots to highlight key pattern in sales and customer behavior.

The data analysis revealed that sales increased during promotional period and testing seasons while low performance occurred in off-peak months. Customer satisfaction and repeat purchase were higher when discount and faster service were offered. These insights show that data-driven strategies weakness effectively.

1. Continue offering targeted promotions during low sales months.
2. Monitor customer feedback regular through surveys and reviews.
3. Use performance dashboard to track KPIs like sales growth, customer retention and satisfaction scores.