**IDEATION PHASE**

**Brainstorm & Idea Prioritization**

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| **Date** | 16-06-2025 |
| **Team ID** | LTVIP2025TMID48265 |
| **Project Name** | Strategic Product Placement Analysis: Unveiling Sales Impact with Tableau Visualization |
| **Maximum Marks** | 4 Marks |

**Objective:**

Brainstorming creates a collaborative, open environment where all ideas are welcome and encouraged. It allows a team to generate multiple creative solutions, group and prioritize them based on feasibility and impact.

**Step 1: Team Gathering, Collaboration and Problem Identification**

The team collaborated to understand challenges related to product placement and its impact on sales and consumer behaviour in a retail environment. We analyzed the existing sales data, product placement patterns, and demographic behaviour to find the core pain points businesses face.

Real-world issues identified:

* No insight into how product position affects sales
* Difficulty tracking consumer behaviour trends
* Manual analysis of foot traffic vs sales
* Lack of visual tools for data-driven decisions

**Selected Problem Statement:**

**"Retailers lack a centralized, visual approach to analyse how product positioning influences sales performance and consumer behaviour."**

**Step 2: Brainstorming, Idea Listing and Grouping**

**Raw Ideas Collected:**

* Track sales volume by product position
* Compare competitor pricing
* Monitor foot traffic impact
* Analyse seasonal variations
* Study demographic influence on product preference
* Visualize promotions vs sales
* Create dashboards for quick insight
* Implement interactive filtering
* Build automated reports
* Embed dashboards in a web UI

**Grouped Ideas:**

1. **Automation & Filtering**
   * Use filters to interactively slice data
   * Automate comparison of variables like price, volume, traffic
2. **Placement & Inventory Analytics**
   * Sales by product placement (Endcap, Aisle, Shelf)
   * Foot traffic vs visibility impact
3. **Consumer behaviour Analysis**
   * Preferences by demographics
   * Seasonal purchasing patterns
4. **Reporting & Visualization**
   * Multi-layered dashboards
   * Story-driven visual exploration
   * Scheduled, downloadable reports
5. **Web Integration**
   * Embed dashboards and stories using Flask for UI presentation

**Step 3: Idea Prioritization**

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| --- | --- | --- | --- |
| **Idea** | **Impact** | **Feasibility** | **Priority** |
| Visualize sales vs placement | High | High | High |
| Consumer behaviour trends | High | Medium | High |
| Competitor pricing analysis | Medium | Medium | Medium |
| Dashboard with filters | High | High | High |
| Web integration with Flask | Medium | Medium | Medium |
| Seasonal trend reporting | High | High | High |

**1. Avg Sales Volume by Product Position and Category**

**Functionality:**

Analyses how product placement (Endcap, Aisle, Shelf) influences average sales across different product categories.

**Technical Implementation:**

* Used Tableau to group products by category and placement.
* Created stacked bar and heatmap visualizations.
* Applied filters for category, month, and region.

**Benefits:**

* Highlights optimal placement zones
* Helps in shelf-space planning
* Informs restocking and layout decisions

**2. Consumer Demographics vs Sales Volume**

**Functionality:**

Reveals which consumer groups (Families, Seniors, Young Adults, College Students) contribute most to product purchases.

**Technical Implementation:**

* Demographic field visualized against sales volume using pie and bubble charts.
* Tableau filters allow segment-wise exploration.

**Benefits:**

* Enables targeted marketing campaigns
* Improves product design/packaging strategy
* Enhances personalization of promotions

**3. Competitor Price vs Own Price Comparison**

**Functionality:**

Compares how competitor pricing affects sales volume of similar items.

**Technical Implementation:**

* Plotted own product prices vs competitor prices.
* Included profit margin analysis with calculated fields.

**Benefits:**

* Adjust pricing strategy in competitive markets
* Understand sensitivity of customer base to price gaps
* Improves product positioning in pricing hierarchy

**4. Seasonal Trends: Avg Sales by Season and Category**

**Functionality:**

Uncovers how seasonal factors (e.g., festive, summer, winter) influence buying behaviour across categories.

**Technical Implementation:**

* Grouped sales data by "Seasonal" tag.
* Created time-series and line graphs for sales volume.

**Benefits:**

* Informs seasonal stocking and promotions
* Helps optimize marketing spend
* Identifies peak vs off-season sales trends

**5. Dashboard and Story Creation**

**Functionality:**

Provides an interactive Tableau dashboard and data story for stakeholder-friendly exploration.

**Technical Implementation:**

* Dashboard includes:
  + Filter controls (demographics, season, product category)
  + KPIs like sales volume, price, foot traffic
  + 8 Visualizations: Bar, Pie, Donut, Bubble, Heatmap
* Story with 3 scenes:
  + Scene 1: Placement and Sales Relationship
  + Scene 2: Consumer behaviour Insights
  + Scene 3: Seasonal and Pricing Trends

**Benefits:**

* Makes data accessible to non-technical users
* Summarizes key insights in visual story format
* Enables decision-making at a glance

**6. Web Integration with Flask**

**Functionality:**

Allows online access to Tableau dashboards and stories through a Flask web UI.

**Technical Implementation:**

* Embedded Tableau public link into a Flask-based UI.
* Created simple navigation to access visual insights.

**Benefits:**

* Expands accessibility to stakeholders
* Can be hosted internally or externally
* Makes project presentation dynamic and modern