Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	11 June 2025
Team ID	LTVIP2025TMID51124
Project Name	Cosmetic Insights: Navigating cosmetics Trends And Consumer Insights with Tableau
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	Data Collection & Extraction	Downloading the dataset on cosmetics trends, consumer insights, and usage patterns.
FR-2	Collect the Dataset	Collect data from online sources (e.g., Kaggle, Statista, cosmetic product reviews, surveys).
FR-3	Connect Data with Tableau	Connect the dataset to Tableau Public/Desktop to enable visual analysis.
FR-4	Prepare the Data for Visualization	Prepare dataset by: 1. Cleaning 2Collect the Dataset. Removing Nulls 3. Encoding fields 4. Assigning columns (e.g., Age, Region, Product Type, Usage Frequency)
FR-5	Data Visualizations	Create visualizations using Tableau for deep insights into cosmetic usage trends.
FR-6	No. of Unique Visualizations	Build the following visualizations: 1. Bar Chart - Product category popularity 2. Line Chart - Trend of skincare vs makeup 3. Pie Chart - Gender-based product use 4. Donut Chart - Spending by category 5. Bubble Chart - Product satisfaction vs price 6. Word Cloud - Most frequent ingredients 7. Area Chart - Usage by age group 8. Tree Map - Brand-wise market share 9. Packed Bubbles - Most purchased products

		10. Calendar Heatmap - Monthly demand 11. Dual Axis Chart - Cost vs Ratings 12. Histogram - Purchase frequency 13. Box Plot - Monthly spending range 14. Map - Region-wise preferences 15. Stacked Bar - Social media influence 16. Heatmap - Review sentiment by brand 17. KPI Dashboard - Sales/Rating 18. Timeline - Trend emergence over months 19. Scatter Plot - Price vs Quantity 20. Gantt Chart - Product lifecycle
FR-7	Responsive Dashboard Design	Create responsive, interactive dashboards adaptable to mobile, tablet, and desktop views.
FR-8	UX/UI Design	Build clean, minimal, and user-friendly layouts with consistent color schemes.
FR-9	Narrative Flow (Storyboarding)	Divide dashboard into multiple tabs such as: 1. Overview 2. Consumer Segments 3. Trend Analytics 4. Influencer Impact 5. Final Insights/Recommendations
FR-10	Performance Testing	Test dashboard speed, filter execution time, and performance under large datasets. Simulate ETL (if applicable).
FR-11	Utilization of Data Filters	Add dynamic filters for: • Age Group • Gender • Region • Product Type • Brand • Rating
FR-12	Use of Calculated Fields	Use calculated fields like: • Monthly Spend = Price × Quantity • Rating % Change • Weight Index
FR-13	Variety of Visualizations	Use different chart types per variable: e.g., demographics, product type, region.
FR-14	Web Integration	Publish dashboards on Tableau Public.

		Embed into web pages and enable link sharing. Optionally use Google Analytics to track interactions.
FR-15	Project Report and Execution Plan	Include: • Objective & Goals • Tools Used (Excel, Tableau, etc.) • Data Cleaning Steps • EDA (count, mean, ratings, etc.) • Dashboard Screenshots & Logic
FR-16	Project Documentation	Document the entire process: • **Project Title**: Choose a clear, concise, and relevant title. Example: "Comprehensive Consumer Behavior Analysis in the Cosmetics Industry Using Tableau" • **Introduction:** Brief overview of the project. Explain: Why this topic is important, the problem you're solving, and what insights you're aiming for. • **Dataset Description:** State the goal of the project. Example: "To analyze cosmetics usage patterns, consumer behavior, and brand popularity using data visualization." • **Dashboard Details:** Describe your dataset source, structure, and key columns. Include: number of rows, important fields (e.g., Age, Gender, Product Type, Price, Ratings). • **Insights & Recommendations:** Show initial analysis before building dashboards. Use basic statistics like: • Count of records • Average product rating • Most popular category • Total sales/spending by region

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Maintainability	The project files (data sources, Tableau workbook) should be organized and documented clearly for easy updates and edits.
NFR-2	Performance	The dashboard should adapt to different screen sizes (desktop, tablet, mobile) without losing readability or functionality.
NFR-3	Responsiveness	The dashboard should adapt to different screen sizes (desktop, tablet, mobile) without losing readability or functionality.
NFR-4	Scalability	The system should be able to handle increasing amounts of data (e.g., monthly updates or multiple product categories) without requiring major redesigns.