

## Project Design Phase

### Solution Architecture

Date	28 June 2025
Team ID	LTVIP2025TMID48549
Project Name	Cosmetic Insights : Navigating Cosmetics Trends and Consumer Insights with Tableau
Maximum Marks	4 Marks

### Solution Architecture:

The solution architecture is designed in a modular, scalable format that enables efficient data flow and real-time visualization using Tableau.

#### 1. Data Sources:

Structured & Unstructured Data: Sales reports (CSV/Excel), customer reviews, social media (optional APIs), demographic data.

External Sources: Market trends databases, online feedback platforms.

#### 2. Data Ingestion & ETL:

Tools: Excel, Python, SQL

Processes: Clean, transform, and consolidate data into a structured format suitable for analysis.

#### 3. Data Storage:

Storage Medium: Google Sheets / SQL Database / Tableau Extracts

Purpose: Stores refined data ready for visualization.

#### 4. Visualization Layer:

Tool: Tableau

Features: Interactive dashboards showing:

- Sales trends
- Product performance
- Regional heatmaps
- Customer demographics
- Sentiment analysis

#### 5. User Access:

Access Options: Tableau Public / Tableau Server / Embedded in Web Portal

Users: Brand managers, marketing teams, analysts, executives

### Example - Solution Architecture Diagram: