

## Project Design Phase Solution Architecture

Date	14 June 2025
Team ID	LTVIP2025TMID47517
Project Name	<b>Strategic Product Placement Analysis</b>
Maximum Marks	4 Marks

### Solution Architecture:

#### ◇ Goals of the Architecture

1. ☒ **Find the best tech solution** to visualize how product position, price, promotions, and customer demographics affect sales volume.
2. ☒ **Define the system's structure and behavior** using Tableau Public for dashboards and Python/Tableau for preprocessing.
3. ☒ **Outline features, components, and development phases** clearly for visualization and interaction.
4. ☒ **Provide technical specifications** for implementation and scaling.

#### Architecture Components

Layer	Component Description
<b>Data Layer</b>	Source: Product Positioning.csv file with fields like Sales Volume, Foot Traffic, Demographics, Promotion, etc.
<b>Processing Layer</b>	Data cleaning, formatting, and calculated fields in Tableau or via Python (optional).
<b>Application Layer</b>	Tableau logic engine for filters, calculations, and chart rendering.
<b>Presentation Layer</b>	Final dashboard built in Tableau with interactive visuals: bar, funnel, donut, waterfall, etc.
<b>Users</b>	Retail managers, marketing executives, analysts – accessing via Tableau Public or PDF reports.

## Development Phases

Phase	Description
<b>Phase 1</b> – Data Prep	Clean CSV data, convert data types, handle missing values
<b>Phase 2</b> – Basic Visuals	Create bar, donut, and filterable dashboards
<b>Phase 3</b> – Advanced Visuals	Funnel, area, waterfall, and highlight tables with calculated fields
<b>Phase 4</b> – Dashboard + Story	Combine visuals, enable filters, and build an interactive story
<b>Phase 5</b> – Final Report	Export dashboard and insights for stakeholders