

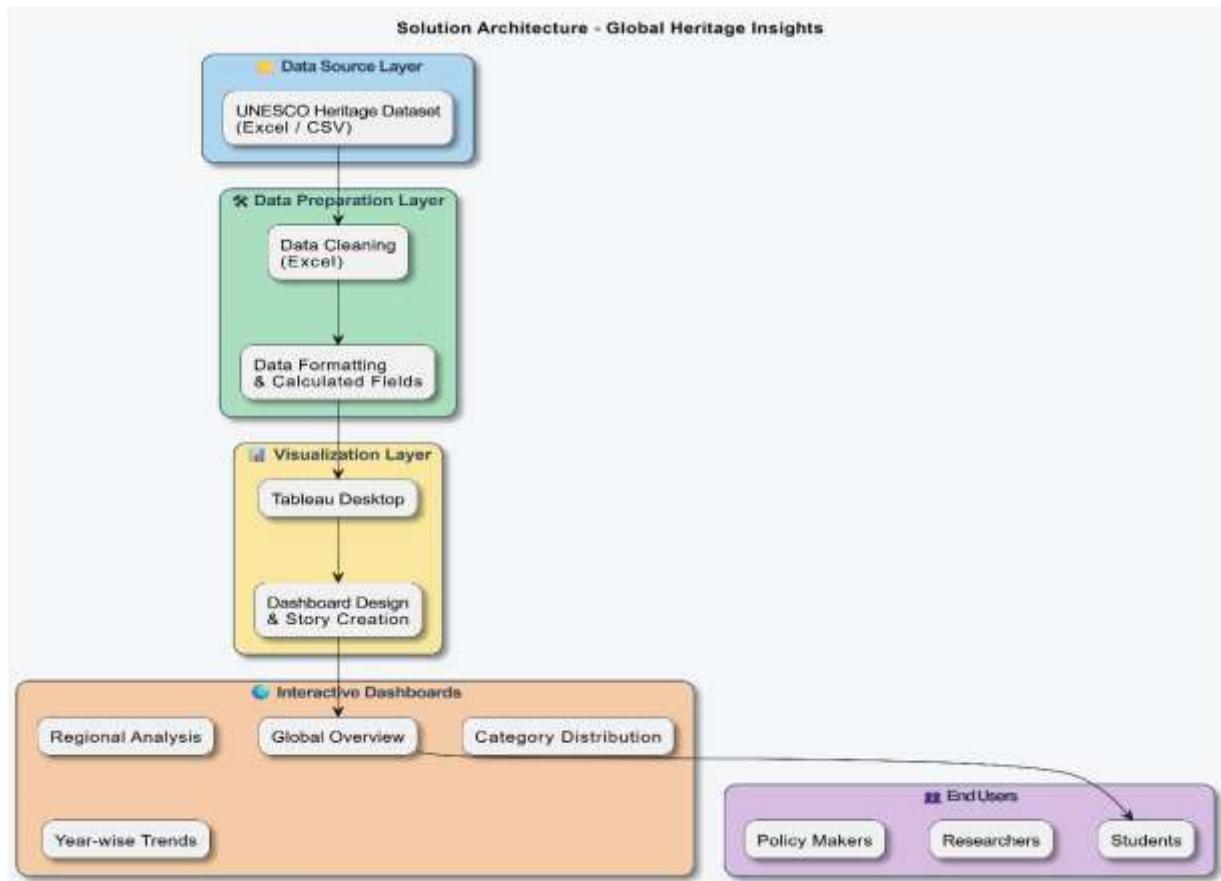
Project Design Phase

Solution Architecture

Date	23/02/2026
Team ID	LTVIP2026TMIDS36154
Project Name	Heritage Treasures: An In-Depth Analysis of UNESCO World Heritage Sites in Tableau
Maximum Marks	4 Marks

Solution Architecture:

The solution architecture of the project follows a structured and layered visualization workflow. Since the project is implemented using Excel and Tableau Desktop, the architecture focuses on data preparation and interactive visualization rather than backend database or cloud deployment.



1. Data Sources Layer

- Primary Dataset: UNESCO World Heritage Sites dataset in Excel / CSV format.

- Contains attributes such as site name, country, region, category (Cultural/Natural/Mixed), year of inscription, and danger status.
- The dataset serves as the foundational input for analysis and visualization.

2. Data Preparation Layer

- Data cleaning performed in Microsoft Excel.
- Removal of missing or inconsistent values.
- Standardization of column formats and country names.
- Creation of calculated fields inside Tableau for category grouping, regional analysis, and trend identification.

This layer ensures that the dataset is structured, accurate, and analysis-ready.

3. Visualization Development Layer

- Tableau Desktop used for dashboard design and visualization.
- Implementation of geospatial mapping using built-in geographic roles.
- Creation of calculated measures for:

Total heritage sites per region

Category-wise distribution

Identification of endangered sites

- Development of interactive filters for region, country, category, and year.

4. Interactive Dashboard Layer

Two dashboards were developed:

- **UNESCO World Heritage Site Overview**

- Displays global distribution of sites
- Category-wise breakdown
- Year-wise inscription trends

- **UNESCO Danger Sites Overview**

- Highlights endangered heritage sites
- Regional comparison of sites under threat
- Focused analysis on preservation concerns

Additionally, one Tableau Story integrates insights from both dashboards to present guided analytical findings.

6. End Users

- **Tourism Boards:** Plan heritage routes
- **Conservationists:** Identify endangered sites
- **Students/Researchers:** Academic insights
- **Policy Makers:** Understand regional heritage gaps