# UNESCO World Heritage Sites Visualization Project

## 1. INTRODUCTION

### 1.1 Project Overview

This project visualizes the UNESCO World Heritage Sites dataset using Tableau to uncover patterns and insights. The aim is to analyze site distribution by country, region, and category (Cultural, Natural, Mixed), and to provide interactive visual analytics to support geographical and categorical exploration.

### 1.2 Purpose

The purpose of the project is to help users explore UNESCO heritage site information interactively. It provides insights into the number of sites per region, their categorization, and endangered status using visual tools like maps and bar charts.

## 2. IDEATION PHASE

### 2.1 Problem Statement

There is a lack of interactive visualization tools for analyzing UNESCO heritage sites data in terms of global distribution, categories, and endangered status.

### 2.2 Empathy Map Canvas

Users want quick access to site information, want to explore cultural and historical distribution, and need a clear view of site status.

### 2.3 Brainstorming

We considered using Excel, Power BI, and Tableau. Due to its rich visual capabilities and interactive dashboards, Tableau was selected.

## 3. REQUIREMENT ANALYSIS

### 3.1 Customer Journey Map

A typical user journey involves accessing the dashboard, filtering by country or category, and drawing insights from visualizations.

### 3.2 Solution Requirement

- Dataset with valid UNESCO site details  
- Tableau Public or Desktop  
- Cleaned data for rendering

### 3.3 Data Flow Diagram

Raw Data → Cleaned CSV → Tableau Visualizations → Dashboard Insights

### 3.4 Technology Stack

- Data Source: UNESCO Kaggle Dataset  
- Tools: Tableau, Excel (for preprocessing)

## 4. PROJECT DESIGN

### 4.1 Problem Solution Fit

The dashboard helps explore UNESCO data visually and interactively.

### 4.2 Proposed Solution

Build a Tableau dashboard with map, bar chart, and category blocks to show geographical and categorical data clearly.

### 4.3 Solution Architecture

Excel preprocessing → Tableau connection → Sheet creation (map, bar, blocks) → Dashboard assembly

## 5. PROJECT PLANNING & SCHEDULING

### 5.1 Project Planning

The project was planned in phases: data collection, cleaning, visualization, and testing.

## 6. FUNCTIONAL AND PERFORMANCE TESTING

### 6.1 Performance Testing

Filters, calculation fields (like COUNT), and responsiveness of dashboards were tested and verified.

## 7. RESULTS

### 7.1 Output Screenshots

Screenshots include:   
- Map View by Country  
- Bar Chart of Sites by Region  
- Category Summary Blocks

## 8. ADVANTAGES & DISADVANTAGES

Advantages:  
- Easy to use dashboard  
- Interactive filtering  
- Clean visuals  
  
Disadvantages:  
- Limited to available dataset  
- Lacks real-time updates

## 9. CONCLUSION

This project successfully provides visual exploration of UNESCO World Heritage Sites and offers insights using an interactive Tableau dashboard.

## 10. FUTURE SCOPE

Include real-time updates, add latitude/longitude for site-level maps, and integrate more filters like continent or endangered year.

## 11. APPENDIX

Dataset Link: [UNESCO World Heritage Sites 2019](https://www.kaggle.com/datasets/ujwalkandi/unesco-world-heritage-sites)

GitHub / Project Demo: [KalugotlaHarshitha/Smart-bridge-project](https://github.com/KalugotlaHarshitha/Smart-bridge-project)