

Project Development Phase

1. Preprocessing Steps & 2. Business Questions with visualisation

Date	12 February 2026
Team ID	LTVIP2026TMIDS35236
Project Name	Visualizattion Tool flor Electric Vehicle Charge and Range Analysis

1. Preprocessing Steps :

1. Data Connectivity

- Connected UNESCO dataset (CSV file) to Tableau.
- Verified data fields like Country, Region, Category, Year Inscribed, Area, and Danger Status.
- Ensured proper data linking before visualization.

2. Data Preparation

- Cleaned dataset.
- Converted data types (Year → Integer, Area → Numeric).
- Grouped data by Region and Category.
- Created calculated fields for counts and percentages.

3. Dashboard

- Designed interactive Tableau dashboard.
- Included:
 - Heritage Sites by Country (Tree Map)
 - Number of Sites by Region (Horizontal Bar Chart)
 - Categories by Sites Count (Pie Chart)
 - Regional Inscription Trends (Line Chart)
 - Category-wise Distribution of UNESCO Sites (Symbol Map)
 - Danger Status by Category (Side-by-Side Bar Chart)
 - Heritage Site Area (Hectares) by Country (Map)
 - Countries per Region (Packed Bubble Chart)
- Embedded dashboard into Flask-based website.

4. Story

- Created data story explaining global heritage distribution.
- Story points:
 1. **Countries per Region** – Europe & North America have the highest number of participating countries, followed by Asia-Pacific and Africa.
 2. **Regional Inscription Trends** – Heritage site inscriptions peaked around the year 2000 and show steady growth in recent years.
 3. **Number of Sites by Region** – Europe & North America dominate in total heritage sites, while Africa and Arab States have comparatively fewer sites.
 4. **Categories by Sites Count** – Most UNESCO sites are Cultural, with fewer Natural and very limited Mixed sites.
 5. **Heritage Site Area by Country** – A few countries contribute very large heritage site areas, showing unequal geographic distribution.
 6. **Heritage Sites by Country (Treemap)** – China, Italy, Spain, and France lead in total heritage site counts globally.

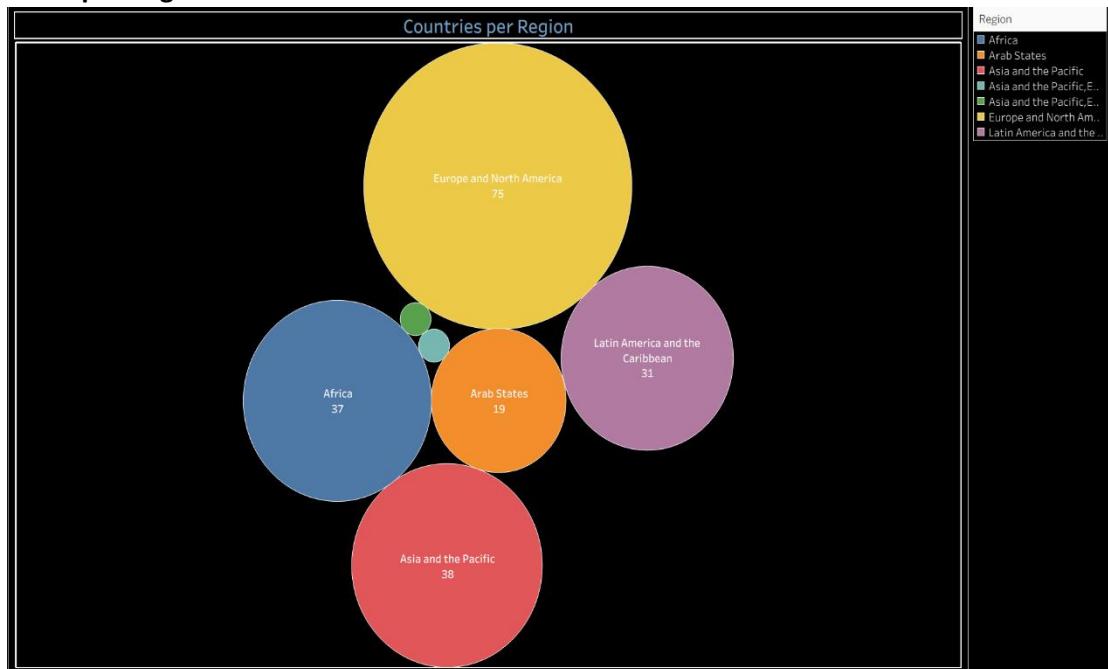
7. **Danger Status by Category** – Only a small portion of sites are marked “In Danger,” with most sites currently protected and stable.
8. **Category-wise Global Map** – Cultural sites are widely distributed across Europe and Asia, while Natural sites are more scattered globally.

5. Creativity (Font and Style)

- Used clean and professional layout.
- Consistent color theme for categories.
- Clear headings and readable fonts.
- Responsive website design using Bootstrap template.

2. Business Questions with visualisation

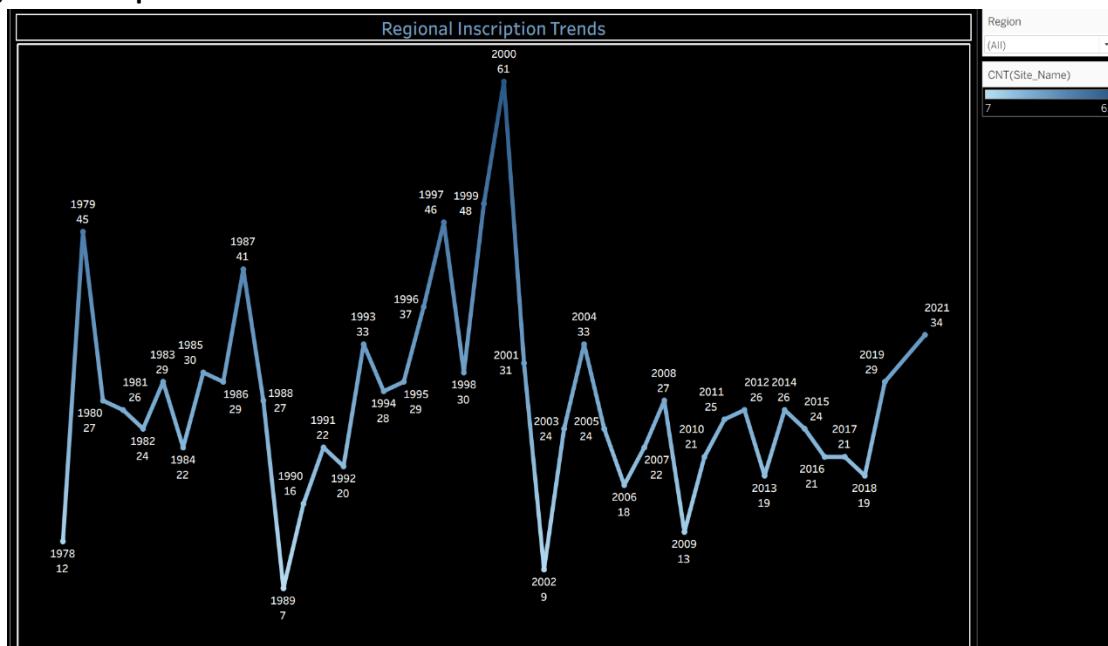
1 Countries per Region



Q: Which regions have the highest country participation in UNESCO listings?

A: Europe & North America have the highest participation (75 countries), followed by Asia & the Pacific (38), Africa (37), Latin America & the Caribbean (31), and Arab States (19).

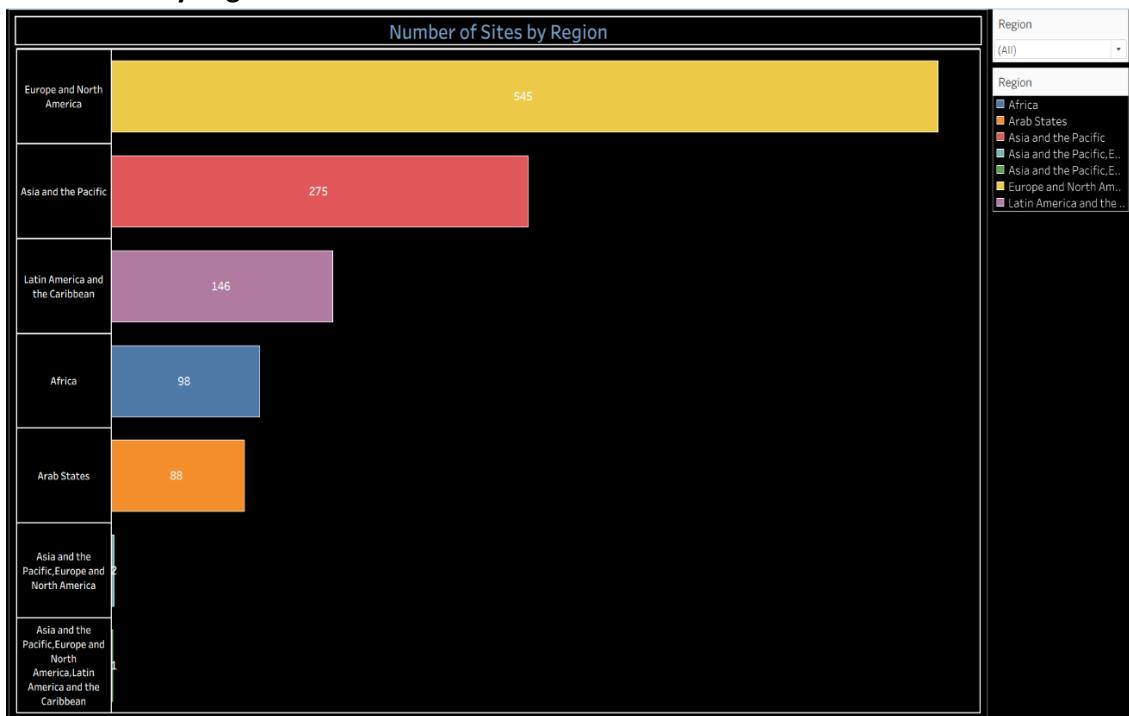
2 Regional Inscription Trends



Q: How have UNESCO site inscriptions changed over time?

A: Inscriptions peaked around the year 2000 and show steady but fluctuating growth in recent years, indicating continued global recognition of heritage sites.

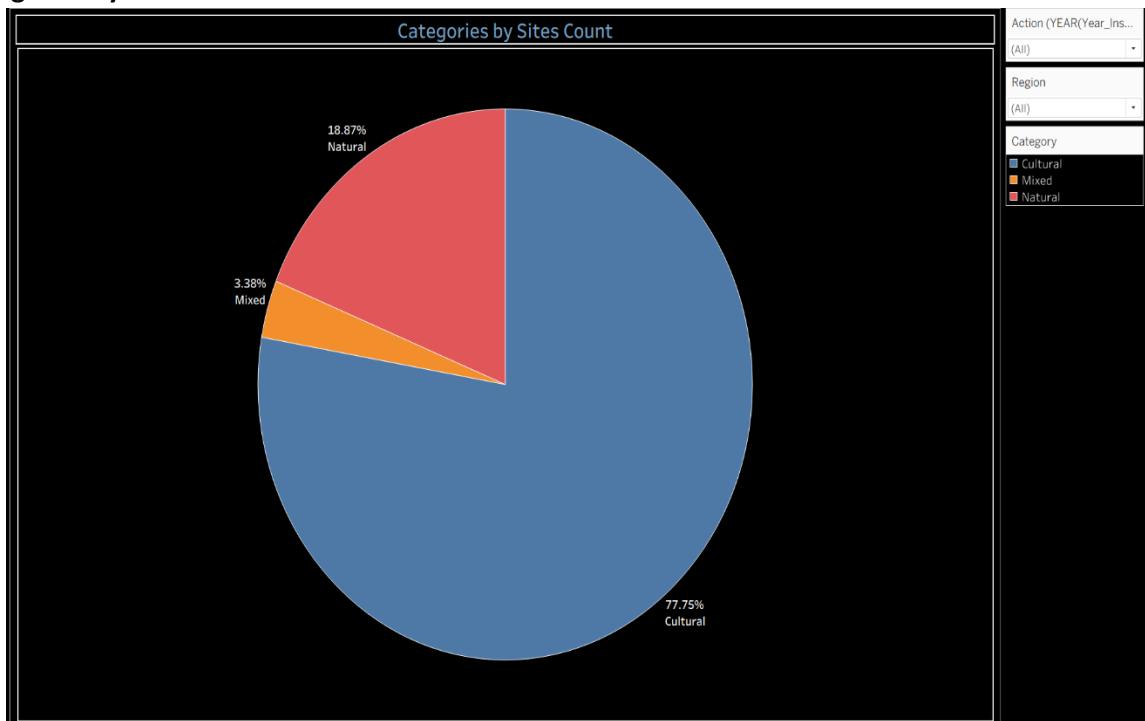
3 Number of Sites by Region



Q: Which region has the most UNESCO sites?

A: Europe & North America lead with 545 sites, followed by Asia & the Pacific (275), Latin America (146), Africa (98), and Arab States (88).

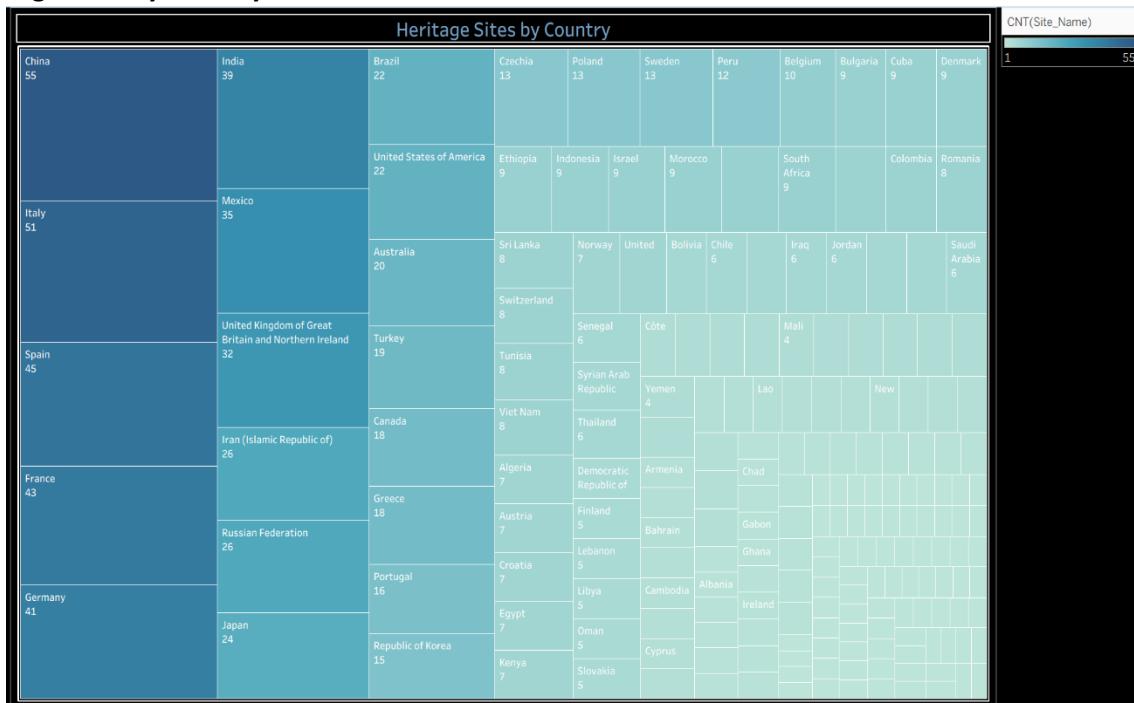
4 Categories by Sites Count



Q: What is the global distribution of site categories?

A: Cultural sites dominate (77.75%), Natural sites make up 18.87%, and Mixed sites represent 3.38%.

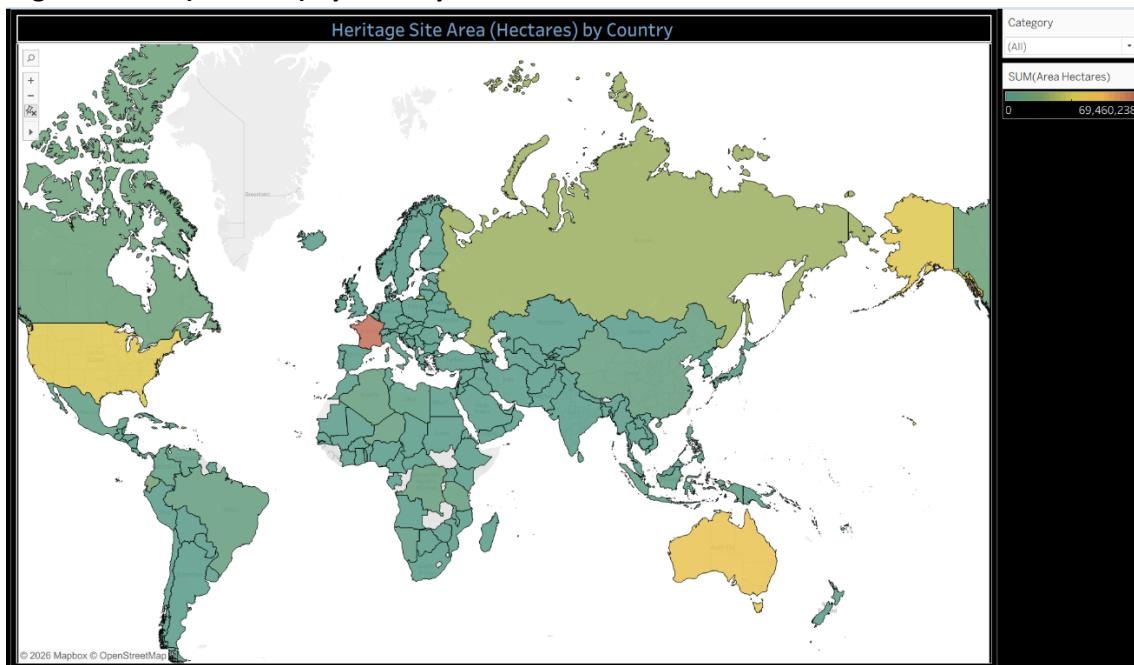
5 Heritage Sites by Country



Q: Which countries have the most heritage sites?

A: China, Italy, Spain, France, and Germany are among the top contributors, with China leading.

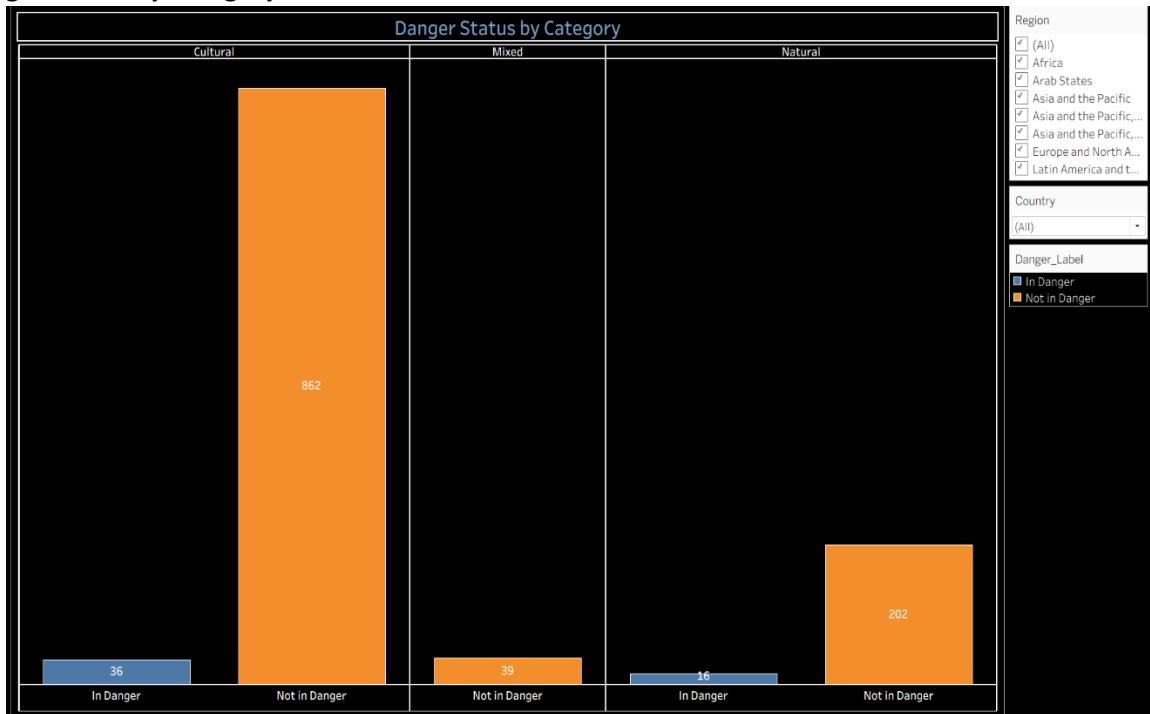
6 Heritage Site Area (Hectares) by Country



Q: Which countries protect the largest heritage areas?

A: Countries like Australia, Canada, Russia, and the USA have some of the largest total heritage site areas.

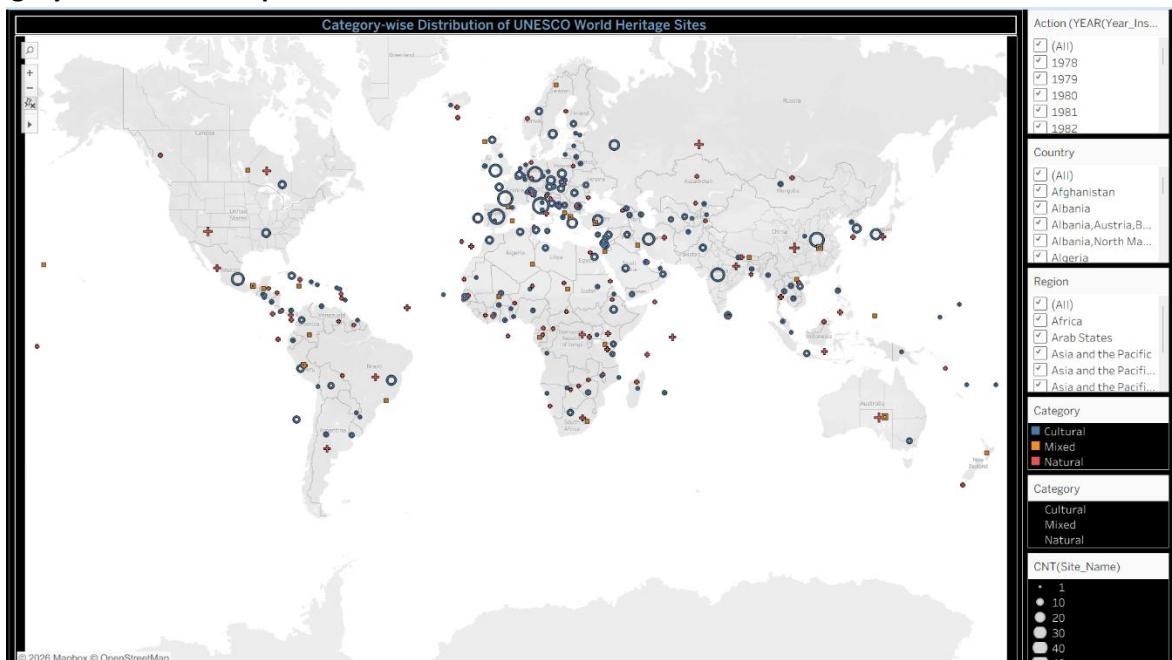
7 Danger Status by Category



Q: How many sites are currently in danger?

A: A small portion of sites are listed as “In Danger,” with Natural and Cultural sites being the most affected categories.

8 Category-wise Global Map



Q: How are heritage sites distributed geographically?

A: Cultural sites are concentrated in Europe and Asia, while Natural sites are more dispersed across Africa, Australia, and the Americas.