

Project Design Phase-II

Data Flow Diagram & User Stories

Date	27 June 2025
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Project Name	Heritage Treasures: An in-depth analysis of UNESCO World Heritage Sites In Tableau

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

Level 0 DFD (Context Diagram)

External Entities: UNESCO Database, Users (Researchers, Policy Makers, Tourists), Heritage Organizations

Heritage Treasures System receives:

- Raw UNESCO Heritage Data
- User Query Requests
- Filter Parameters

Heritage Treasures System provides:

- Interactive Visualizations
- Analytical Reports
- Dashboard Insights

Level 1 DFD (System Overview)

Process 1: Data Extraction & Processing

- Input: UNESCO API Data, CSV Files
- Output: Cleaned Heritage Dataset
- Data Store: Heritage Database

Process 2: Data Analysis & Transformation

- Input: Cleaned Heritage Dataset
- Output: Analytical Metrics, Calculated Fields
- Data Store: Analytics Database

Process 3: Visualization Generation

- Input: Analytical Metrics, User Filters
- Output: Interactive Charts, Maps, Dashboards
- Data Store: Visualization Cache

Process 4: User Interface Management

- Input: User Requests, Dashboard Interactions
- Output: Customized Views, Export Files
- Data Store: User Preferences

Level 2 DFD (Detailed Process Flow)

Sub-Process 1.1: Data Validation

- Validates UNESCO data quality
- Handles missing values and duplicates

Sub-Process 1.2: Data Transformation

- Converts data types
- Creates geographical coordinates
- Calculates heritage site age

Sub-Process 2.1: Trend Analysis

- Analyzes inscription patterns over time
- Regional distribution calculations

Sub-Process 2.2: Risk Assessment

- Identifies endangered sites
- Calculates threat levels

Sub-Process 3.1: Map Visualization

- Generates interactive world maps
- Applies geographic clustering

Sub-Process 3.2: Statistical Charts

- Creates bar charts, line graphs
- Generates comparative analyses

User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Researcher	Data Exploration	USN-1	As a researcher, I can access the Heritage Treasures dashboard to view comprehensive UNESCO World Heritage Sites data	I can see all heritage sites displayed on an interactive world map with detailed information	High	Sprint-1
		USN-2	As a researcher, I can filter heritage sites by country, region, type (Cultural/Natural/Mixed), and inscription year	The dashboard updates dynamically based on my filter selections	High	Sprint-1
		USN-3	As a researcher, I can view detailed information about each heritage site including name, location, criteria, and inscription date	Clicking on any site shows comprehensive details in a tooltip or popup	Medium	Sprint-2
Policy Maker	Risk Analysis	USN-4	As a policy maker, I can identify heritage sites that are currently "In Danger" through visual indicators	Sites at risk are clearly marked with different colors/icons on the map	High	Sprint-1
		USN-5	As a policy maker, I can analyze regional distribution of heritage sites to understand global preservation patterns	I can view charts showing site distribution by continent and country	High	Sprint-2

		USN-6	As a policy maker, I can track historical trends of heritage site inscriptions over time	Line charts show inscription trends by year and region	Medium	Sprint-2
Heritage Organization	Conservation Planning	USN-7	As a heritage organization, I can export site data and visualizations for reports and presentations	I can download charts, maps, and data in PDF, PNG, and Excel formats	Medium	Sprint-3
		USN-8	As a heritage organization, I can compare heritage site distributions across different criteria and time periods	Side-by-side comparisons and trend analyses are available	Medium	Sprint-3
		USN-9	As a heritage organization, I can access summary statistics and KPIs about global heritage preservation	Dashboard shows total sites, endangered sites, regional breakdowns, and key metrics	High	Sprint-2
Tourist/General Public	Discovery & Education	USN-10	As a tourist, I can explore heritage sites by geographic region to plan visits	Interactive map allows me to zoom into specific regions and view nearby sites	Low	Sprint-3
		USN-11	As a general user, I can learn about different types of heritage sites and their significance	Educational content and site descriptions are easily accessible	Low	Sprint-4
		USN-12	As a tourist, I can view heritage sites with high tourist appeal or cultural significance	Sites are categorized and ranked by various criteria including visitor information	Low	Sprint-4
Data Analyst	Advanced Analytics	USN-13	As a data analyst, I can perform comparative analysis between different regions and time periods	Advanced filtering and comparison tools are available	Medium	Sprint-3

		USN-14	As a data analyst, I can identify patterns and correlations in heritage site data	Statistical analysis tools and correlation matrices are provided	Medium	Sprint-4
		USN-15	As a data analyst, I can customize dashboard views and save preferred configurations	Personal dashboard layouts can be saved and shared	Low	Sprint-4
Administrator	System Management	USN-16	As a system administrator, I can update and refresh the UNESCO heritage data	Data refresh functionality is available with validation checks	High	Sprint-1
		USN-17	As a system administrator, I can monitor dashboard performance and user activity	Performance metrics and usage analytics are available	Medium	Sprint-3
		USN-18	As a system administrator, I can manage user access and permissions for different dashboard features	Role-based access controls are implemented	Medium	Sprint-2