**Smart Bridge Data Analytics Program on Tableau  
Solution Architecture Report  
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**1. Introduction**

The Solution Architecture defines the structural design of the dashboard system — describing how data will flow from the source to the final visual output.

**2. Architectural Layers**

1. **Data Acquisition Layer**
   * Input: UNESCO Heritage Sites dataset (CSV)
   * External APIs (Optional for live updates)
2. **Data Processing Layer**
   * Cleaning and formatting in Excel/Python
   * Removal of null values, standardizing date formats
3. **Visualization Layer**
   * Tableau Desktop for dashboard creation
   * Use of Tableau worksheets for each visualization type
4. **Publishing Layer**
   * Tableau Public for deployment
   * User access via browser/mobile

**3. Architecture Diagram *(Visual Placeholder)***

[UNESCO Dataset] → [Excel/Python Cleaning] → [Tableau Desktop]

→ [Interactive Dashboards] → [Tableau Public Hosting] → [End Users]

**4. Data Flow Summary Table**

|  |  |  |
| --- | --- | --- |
| **Step** | **Tool** | **Output** |
| Data Import | Excel/Python | Cleaned CSV |
| Visualization Creation | Tableau Desktop | Worksheets & Dashboards |
| Deployment | Tableau Public | Public Link |
| Usage | Web/Mobile | Interactive View |

**5. Scalability Considerations**

* Ability to integrate more datasets in the future
* Potential use of live connections for real-time data updates
* Modular dashboard design for easy enhancements