Data Governance Requirements

The solution should support the Federal Enterprise Architecture Framework v2 (FEAF), Data Reference Model (DRM).

- Ability to create and store a Logical Data Model
  - Presents data requirements that reify the information concepts identified by corresponding Conceptual Information Models.
- Data knowledge management plan
  - Provides a detailed description of how knowledge, information, and data are shared across the enterprise between systems, applications, knowledge warehouses, and databases.
- Data quality plan
  - A systematic approach to data quality assurance
- Data Flow Diagram
  - The functions (activities) performed by systems or services, their hierarchical structure, and their resource flows
- Physical Data Model
  - Presents data-elements and data-structures that reify the data requirements specified by corresponding logical data models
- CRUD Matrix
  - Presents resources that are consumed and produced by activities performed by organizational performers
- State-Transition Diagram
  - The states systems transition to in response to events
- Event Sequence Diagram
  - A sequence of triggering events associated with resource flow and systems
- Data Dictionary
  - A centralized repository of information about data such as name, type, range of values, source, and authorization for access for each data element in the organization's files and databases
- Object Library
  - A collection of computer programs in the form of relocatable instructions, which reside on, and may be read from, a mass storage device
- Data Description
  - Enterprise or Business View: Used to communicate consistent definition of the meanings and descriptions of the data. This view is focused on the semantics (i.e., meaning) of the information stored as objects of interest and is independent of how that data is stored or accessed.
  - Information Consumer View: The external perspective of the information typically provided in information exchange specifications, end user interfaces, and reports.

- o Physical View: The information view focused on the physical structure needed to support the access, storage, and retrieval needs of an operational system.

- Metadata

  - o Semantic: conveys the meaning of data;
  - o Resource: provides bibliographic information;
  - o Discovery: enables search and discover (e.g., "tagging" and "metacard");
  - o Structural: defines physical implementation (e.g., database and exchange schemas, file formats);
  - o Technical: defines technical process execution, completion, success or failure.
- Data Descriptions (Enables the development of data architecture or structure at the conceptual, logical and physical level.)
  - o Data Inventories
  - o Data Discovery
  - o Definitions and Semantics
  - o Structure and Schemas
  - o Syntax
  - o Pedigree and Lineage
  - o Authoritative Data Sources
  - o Security and Protection
  - o Data Transfer Standards
- Data Context (Also known as categorization or classification)
- Data Sharing Metrics
  - o Discovered - Content made consistently findable or present;
  - o Identified - Content that is semantically consistent and reasonable;
  - o Standardized - Content that has syntactic and structural integrity;
  - o Reused - Content that can be leveraged within and across domains to minimize redundancy;
  - o Trusted - Content that is 'reliable';
  - o Good Quality - Content that embodies and shares conformance, integrity, and timeliness among many business processes; and
  - o Protected - Content that can be shared, free of inappropriate disclosure or compromise.
- Provide clear data ownership and stewardship to facilitate open standards based on interoperability.
- Categorize and integrate data along functional lines of the business to establish common data vocabulary and data standardization to build integration adaptors and systems.
- Facilitate global identification of security and privacy issues and solutions to provide consistent means to categorize and classify data and information.
- Support electronic exchange of information to facilitate electronic registries and repositories for data components.
- Ability to house Data Stewards and other governance players per process
  - o Role based access to data

- Tool can be on-premise. If Cloud-based option must be FedRAMP certified and meet IRS PUB1075.