Reference Data Management Plan

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Reference Data Management Plan

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Description: A plan for managing reference data across the enterprise.

Certainly! Below is a comprehensive **Reference Data Management Plan** tailored for the **adpa-enterprise-framework-automation** project, considering its modular, standards-compliant approach, multi-provider integrations (Adobe, Azure, Google, Microsoft Graph, etc.), and enterprise automation objectives.

Reference Data Management Plan

For: adpa-enterprise-framework-automation (v3.2.0)

1. Introduction

Purpose:

Establish a standardized, robust approach to managing all reference data used by the automation framework and its integrations (e.g., Adobe Creative Suite APIs, Azure API Center, SharePoint, project management standards). The goal is to ensure consistency, integrity, traceability, and controlled access to reference data across document generation, standards compliance, and workflow automation features.

Scope:

Covers all reference data domains critical to:

- Standards mapping (BABOK v3, PMBOK 7th, DMBOK 2.0)
- API integrations (Adobe, Microsoft Graph, Azure, Google AI, etc.)
- Template libraries (document, layout, and visualization templates)
- User roles/permissions and organizational metadata
- Regulatory codes, ISO standards, and taxonomy vocabularies

2. Roles & Responsibilities

Data Stewards

- Appointed per domain (e.g., Standards, Templates, User Roles).
- Ensure correctness, completeness, and up-to-date status of reference data.
- Validate data before approval and deployment.

Data Owners

- Typically product owners or lead architects.
- Accountable for overall governance, lifecycle decisions, and escalation.
- Approve changes and manage cross-domain impacts.

IT Department / DevOps

 Provision and maintain technical infrastructure (databases, APIs, access layers).

- Ensure backup, disaster recovery, and platform security.
- Support automation for reference data synchronization and deployment.

Integration Leads

- Oversee reference data mapping for external APIs (Adobe, Azure, SharePoint).
- Coordinate with Data Stewards for source-of-truth alignment.

3. Reference Data Identification & Sourcing

Identification Process:

- New reference data requirements are identified during requirements gathering, standards updates, or API onboarding.
- Proposals documented in the project backlog (e.g., JIRA, GitHub Issues).
- Impact analysis performed with relevant stakeholders.

Approved Sources:

• Global Standards:

- BABOK v3, PMBOK 7th, DMBOK 2.0 (official publications, maintained in versioned JSON/YAML).
- ISO codes (e.g., country, currency, language) sourced from ISO.org.
- Regulatory and compliance codes (e.g., GDPR, SOX).

• Enterprise Taxonomies:

 Internal lists for user roles, document categories, template types.

• External APIs:

- Adobe API metadata (InDesign, Illustrator, Photoshop endpoints/capabilities).
- Microsoft Graph (SharePoint, Teams), Azure API Center, Google Al providers.

Template Libraries:

 Reference templates stored in central repository; changes require approval.

4. Reference Data Storage & Modeling

Central Repository:

Architecture:

- Centralized PostgreSQL (or equivalent) RDBMS for structured, versioned storage.
- Supplemented by Git-based storage for static JSON/YAML files (standards, templates).
- Read-only cache for high-frequency lookups (Redis or inmemory).

Access:

- Exposed via internal Express.js REST API endpoints (secured, documented via Swagger/OpenAPI).
- Integration with API Center for discoverability and lifecycle management.

Data Model:

• Core Entities:

- Standards (BABOK, PMBOK, DMBOK) with hierarchical structure.
- Template metadata (ID, version, type, tags, owner, status).
- Roles & permissions (role ID, name, actions, scope).
- API provider definitions (name, capabilities, version).
- Taxonomies (categories, document types, compliance tags).

• Relationships:

- Templates reference standards and taxonomies.
- Users/teams reference roles.
- API integrations reference approved provider data.

5. Reference Data Maintenance & Governance

Change Management:

- Change requests submitted via ticketing system (JIRA/GitHub).
- Data Stewards review and prepare data updates.
- Testing in non-prod environment; automated validation scripts (e.g., schema validation with Joi/Zod).
- Data Owners review and formally approve changes.
- Automated CI/CD pipeline promotes approved data to production.

Versioning:

- Each reference data set is versioned with semantic versioning (major.minor.patch).
- Historical versions retained for auditability and rollback.
- API endpoints support versioned requests (e.g., /api/v1/reference/standards?version=3.0.0).
- Change log maintained and published with each release.

6. Reference Data Distribution & Access

Access Mechanisms:

- APIs:
 - RESTful endpoints (Express.js) with OpenAPI documentation.
 - GraphQL endpoints (planned).

• Replication/Synchronization:

- Nightly jobs to synchronize critical reference data (e.g., ISO codes, external standards).
- Local file-based fallback for offline operation.

• Programmatic Access:

 SDKs/utilities in Node.js/TypeScript for direct data access in CLI and automation scripts.

Security:

- Role-based access control (RBAC):
 - Only Data Stewards and Owners may update reference data; consumers read-only.
- API authentication:
 - API Keys and JWT tokens (see API Testing Summary).
 - Integration with Azure AD for enterprise SSO.
- Audit logs:
 - All read/write access logged with user ID, action, timestamp.

7. Quality & Compliance

Quality Metrics:

• Accuracy:

- o Data must match source of truth (e.g., official standards, ISO).
- Automated validation checks with test suites.

Completeness:

- No missing fields in required attributes.
- Coverage checks for all referenced standards/templates.

• Timeliness:

- Regular refresh cycles for externally sourced data (e.g., monthly ISO updates).
- SLA for reflecting standards updates (e.g., 2 weeks from publication).

• Consistency:

- Automated schema and referential integrity validation.
- Duplicates prevention checks.

Compliance:

Regulatory:

- GDPR and data residency (where applicable for reference data containing PII).
- Accessibility of reference data for audit and regulatory review.

Standards:

 All standards-related reference data must be traceable to official publications and update logs.

• Security:

- Data stored and transmitted using encryption at rest and in transit.
- Regular security reviews and penetration tests for APIs exposing reference data.

Appendix: Sample Reference Data Domains

Domain	Example Data Sets	Source/Authority	Update Frequency
Standards Mapping	BABOK v3, PMBOK 7th, DMBOK 2.0	IIBA, PMI, DAMA Intl.	Annual/As needed
ISO Codes	Country, Currency, Language	ISO.org	Monthly
Templates	Document, Layout, Visualization	Internal, Adobe API	Quarterly
User Roles/Permissions	Admin, Project Manager, Analyst, Viewer	Internal Policy	As needed
API Providers	Adobe, Azure, Google,	Vendor Docs	As needed

Domain	Example Data Sets	Source/Authority	Update Frequency
	Microsoft Graph		
Taxonomies	Document types, Compliance, Tags	Internal/Industry Standards	As needed

References

- BABOK v3
- PMBOK 7th Edition
- DMBOK 2.0
- ISO Standards
- Azure API Center
- Adobe Creative Suite APIs
- Microsoft Graph API
- Data Management Maturity Model (DMM)

Maintained by:

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Last Updated: July 2025

This plan is a living document and will be reviewed quarterly or upon major platform or standards changes.

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