Semantic Artefact Governance Recommendations title

Governance Framework

SA Governance components		Model #1: SA project-based Initiatives	Model #2: Distributed SA development and support-based Initiatives
Governance Framework	**Principles**	Where applicable, follow existing principles (e.g., OBO, FAIR, LOT, 5 Star Data[1]).	Inform the community about existing principles and provide guidelines for establishing them.
	Recommendations	Consider good practice and recommendations.	Guide the community to existing practices and recommendations.
	Standards	Adopt W3C standards and guidelines to ensure a high level of quality.	Set the baseline standards across communities to facilitate the quality evaluation of SA.
	Quality control	Adopt software engineering practices (e.g., implementing version control systems) and use ontology validators and evaluators.	Guide the community in using software engineering practices and quality evaluator tools throughout the different stages of the SA lifecycle. Develop pipelines and tests tailored to the specific needs of the community.
	Training	Relying on training materials available, maybe set up training sessions for primary users (e.g., systems that implemented the SA).	Organise training sessions for the community to educate them about the principles and recommendations followed and how to ensure the quality of SA.

---

[1] https://5stardata.info/en/

Aspects of SA lifecycle

SA Governance components		Model #1: SA project-based Initiatives	Model #2: Distributed SA development and support-based Initiatives
Aspects of SA lifecycle	Availability (licencing)	Make an SA available with clear licensing terms.	Inform the community about the benefits of choosing an open licence to maintain their copyright while enabling the public to reuse their SA.
	Access rights and security policy	Manage the permissions granted to different individuals within the SA lifecycle.	Provide guidelines on methods and tools for implementing a secure access policy.
	Versioning	Identify each version of the SA using a unique IRI.	Guide the community towards relevant practices and encourage them to establish a plan (workflows) for the periodic release of new versions of SA.
	Deprecation	Establish a deprecation process at the SA element (term) level and notify primary users of updated or alternative terms upon deprecation.	Guide the community towards relevant practices for deprecation.
	Documentation	Create a human-readable description of the SA (HTML pages) to enhance understanding of its structure and content. Where relevant, provide documentation on critical aspects of the SA lifecycle (e.g., versioning, testing, data access, etc.).	Motivate the community to provide documentation for their SA development and curation processes and potential SA usage. Encourage the use of selected semantic artefact catalogues.
	Unique identification for (meta)data	Assign a globally unique and persistent identifier to the SA(maybe SA metadata, and SA elements). Resolve each of them to their respective representations as requested by the client, using redirection practice and content negotiation mechanisms.	Define the namespace naming conventions. Inform the community about redirection, resolution, and PID provider services. To support this, maybe associate them with selected semantic artefact catalogues.
	Relevant attributes, metadata and provenance	Use common metadata standards to provide rich context to ontology and ontology terms in different aspects such as description, administration, and provenance.	Establish minimum standards metadata for reporting SA within the community. Encourage the use of selected semantic artefact catalogues dealing with metadata and provenance.
	(Meta)data access and semantic repository	Host the SA (metadata) on web (application) servers or tools, such as an ad hoc SKOSMOS installation or a triple store (e.g., Virtuoso) or SA catalogues, to make it accessible via HTTP(S).	Introduce the community to domain-specific semantic artefact catalogues where they can publish their SA, making them accessible through services for term lookup, ontology explorations and dedicated APIs.
	Information model	Utilise RDF(s), OWL, and SKOS (W3C standards) as core vocabularies for encoding and structuring SA. Offer one or more serialisations of the SA in acceptable syntax formats.	Advocate for using W3C standards when selecting knowledge representation languages for SA development within the community. Recommend using specific representation languages and syntax to ease interoperability.
	(Meta)data reuse	Identify and reuse specific terms or patterns defined in existing SA rather than creating new ones from scratch.	Provide a primary list of selected SA for reuse or direct the community to tools that help locate their desired SA for reuse. (e.g., ontofox[2]).
	Visualisation	Provide visual representations for the SA.	Direct the community to tools for visualising SA.

---

[2] ontofox.hegroup.org

SA Governance components		Model #1: SA project-based Initiatives	Model #2: Distributed SA development and support-based Initiatives
	Mapping	Link the SA terms to equivalent terms in other relevant SAs by using standard properties such as skos:closeMatchs, rdfs:seeAlso, owl:sameAlso, owl:equivalentClass, dcterms:relation, etc.	Encourage the community to contribute mappings to other relevant SA terms.
	Naming Conventions	Choose standard label properties (RDFS, SKOS) to provide a primary label or synonym for every SA term.	Encourage the community to follow established naming conventions based on W3C standards.
	Scope	Prepare a brief text document that clearly states the extent of the domain the SA intends to cover.	Ensure that SA developed within the community has a well-defined scope and content consistent with that scope.
	Commitment to collaboration	Utilise tools that facilitate collaborative SA development, such as collaborative editing platforms. Illustrate the usage of SA outside of the immediate circle of stakeholders.	Ensure all SA is assigned a contact person (with detailed information) to facilitate communication between the community and the SA providers. Define a dedicated role responsible for communications between the community and the SA providers.
	Channels for communications and contribution	Create responsive channels to collect feedback and term requests from users and domain experts and keep them informed about updates to the SA.	Host public forums to promote knowledge sharing among various stakeholders in the community or suggest practices (e.g. forums on semantic artefact catalogues or issue trackers) to ease feedback and communications.

Organisational Structure

SA Governance components		Model #1: SA project-based Initiatives	Model #2: Distributed SA development and support-based Initiatives
Organisational structure	Coordination level	Appoint a Project Manager responsible for overseeing the design, conduct, and reporting of	Assign a Coordination role to an individual or team responsible for defining the strategy to

		the SA project. The Project Manager will manage and monitor collaborative relationships, fulfilling all technical, scientific, financial, and administrative obligations necessary to maintain project standards and ensure process integrity. Additionally, the Project Manager will investigate widely used principles and best practices, adopting those most suitable for the project.	support the community in managing SAs. This includes providing targeted principles, recommendations, guidelines, relevant tools, services, training materials, consulting programs, and workshops. The Coordinator will outline responsibilities and accountabilities for stakeholders within the community—ranging from SA owners and curators to experts and contributors—and coordinate activities across the website, repository, and communication channels.
	Organisation level	Define a technical role or team responsible for developing and maintaining the project website or catalogue where the SA is published, and for supporting related services, such as APIs. Additionally, establish a role for communicating with users of the SA. If the SA is only accessible online through an external catalogue, a curator may be sufficient to report potential issues with this external catalogue and related services, and to communicate with users of the SA.	Create dedicated documentation outlining the principles and standards that the community is encouraged to follow. Establish a website or helpdesk to guide various stakeholders and provide support for implementing good practices and shared tools within the community. Include technical activities for developing and maintaining this website or helpdesk.
	Digital object level	Alongside ontology developers and contributors, define an ontology curator who will: - Regularly review the ontology to integrate new data and adapt it to evolving requirements. - Oversee key aspects of the SA lifecycle, including versioning, deprecation, identification, and the publication. - Maintain a broad network of contacts within the community, expert groups, coordination teams, and relevant external parties to ensure ongoing collaboration and knowledge sharing.	Make sure each SA is assigned to a curator and define a baseline set of responsibilities for them. Establish a working group within the community to assess the need for new SAs and provide feedback on existing ones and their potential applications. Facilitate connections between diverse stakeholders and relevant existing scientific domain experts in the community.