

Annex C: Requirements

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This annex contains the authoritative requirement records for the Structured Information Processing Reference Architecture (SIP-RA) Request for Proposals.

Each requirement record provides a stable identifier, short title, normative Statement, requirement level, rationale, evaluation criteria, and backlinks to the sections in which the requirement is referenced.

Requirement Identifiers

The requirement register contains two requirement families:

Prefix	Requirement Family	Description
GPR	General Proposal Requirement	Identifies a general OMG proposal requirement or evaluation criterion principally derived from Section 5
SIP	Structured Information Processing Requirement	Identifies a requirement specific to the proposed Structured Information Processing Reference Architecture principally defined in Section 6

The numeric portion of each identifier is unique within its requirement family. The identifier remains stable when the requirement is referenced from multiple sections.

The prefix identifies the requirement family. It does not indicate whether the requirement is mandatory, recommended, optional, or conditional.

General Proposal Requirements

General Proposal Requirements govern the general structure, quality, compatibility, security, internationalization, and evaluation of a Submission.

- [GPR-001 — XMI Representation of OMG-Language Models](#)
- [GPR-002 — XMI Representation of Non-OMG-Language Models](#)
- [GPR-003 — PIM-to-PSM Mapping Definition](#)
- [GPR-004 — PIM-to-PSM Normative Authority](#)
- [GPR-005 — Precise and Functionally Complete Submission](#)
- [GPR-006 — Implementation Assumptions and Context](#)
- [GPR-007 — Reuse of Existing Standards](#)
- [GPR-008 — Required Changes and Extensions to Existing OMG Specifications](#)
- [GPR-009 — Context-Independent Functional Factoring](#)
- [GPR-010 — Separate Specification of Reusable Elements](#)
- [GPR-011 — Necessary Normative Dependencies](#)
- [GPR-012 — Avoidance of Gratuitous Reuse](#)

- [GPR-013 — Compatibility with Existing Standards](#)
- [GPR-014 — Combined Use of Complementary Specifications](#)
- [GPR-015 — Multiple Conforming Implementation Approaches](#)
- [GPR-016 — Avoidance of Normative Implementation Descriptions](#)
- [GPR-017 — Minimal Interoperability Constraints](#)
- [GPR-018 — Independent, Substitutable, and Interoperable Implementations](#)
- [GPR-019 — Implementation Replacement Without Client Changes](#)
- [GPR-020 — Secure Implementation and Deployment](#)
- [GPR-021 — Security Analysis](#)
- [GPR-022 — Internationalization Support Classification](#)
- [GPR-023 — Inspectable and Testable Conformance](#)
- [GPR-024 — XMI Representation of Metadata Models](#)

Structured Information Processing Requirements

Structured Information Processing Requirements govern the scope, architectural abstractions, modeling, Governance, integration, conformance, required Submission content, and traceability of the proposed SIP-RA specification.

- [SIP-001 — Platform-Independent Reference Architecture](#)
- [SIP-002 — Formal Platform Independent Model](#)
- [SIP-003 — Reference Architecture Constituents](#)
- [SIP-004 — Separation of Architectural Concerns](#)
- [SIP-005 — Structured Information Flow](#)
- [SIP-006 — Ordered Modular Processing Flows](#)
- [SIP-007 — Structured Information Attachment Points](#)
- [SIP-008 — Information Boundary Constructs](#)
- [SIP-009 — Version-Controlled Interface Contracts](#)
- [SIP-010 — Structural Artifact Lifecycle Governance](#)
- [SIP-011 — Semantic Artifact Lifecycle Governance](#)
- [SIP-012 — Interpretive Artifact Lifecycle Governance](#)
- [SIP-013 — Reproducible Interpretation](#)
- [SIP-014 — Jurisdictional Control of Structural Definitions](#)
- [SIP-015 — Jurisdictional Control of Semantic Definitions](#)
- [SIP-016 — Cross-Jurisdictional Integration](#)
- [SIP-017 — Cross-Security-Boundary Integration](#)
- [SIP-018 — Information-Flow Segmentation](#)
- [SIP-019 — Data Plane and Control Plane Separation](#)
- [SIP-020 — Governance Constraints and Interface Contracts](#)
- [SIP-021 — Independent Conformance Requirements](#)
- [SIP-022 — Technology-Independent Conformance Points](#)
- [SIP-023 — Governance Evolution and Operational Execution](#)
- [SIP-024 — Domain-Specific Content Exclusion](#)
- [SIP-025 — Transport and Runtime Mechanism Exclusion](#)
- [SIP-026 — Preservation of Existing OMG Specifications](#)
- [SIP-027 — Ontology, Vocabulary, and Taxonomy Exclusion](#)
- [SIP-028 — Doctrine, Procedure, and Policy Exclusion](#)

- SIP-029 — Implementation and Deployment Independence
- SIP-030 — Tool and Technology Neutrality
- SIP-031 — Architectural Positioning
- SIP-032 — Separation from Existing Mechanisms
- SIP-033 — Architectural Layering
- SIP-034 — Preservation of Existing Transport and Exchange Constructs
- SIP-035 — Complementarity with Exchange and Interoperability Specifications
- SIP-036 — Relationship to Semantic Federation and Ontology Modeling
- SIP-037 — Technology-Neutral Integration Points
- SIP-038 — Nonduplication of Existing Capabilities
- SIP-039 — Platform-Independent Modeling
- SIP-040 — Representation-Independent Architectural Constructs
- SIP-041 — Modeling and Tooling Conformance Neutrality
- SIP-042 — Complete Reference Architecture Specification
- SIP-043 — Integrated Submission Document
- SIP-044 — Structured Architectural Description
- SIP-045 — Architectural Visual Representations
- SIP-046 — Platform Independent Model Abstract Syntax
- SIP-047 — Platform Independent Model Formal Semantics
- SIP-048 — Platform Independent Model Formal Precision
- SIP-049 — Architectural Concern and Lifecycle Description
- SIP-050 — Implementation-Independent Interpretive Logic
- SIP-051 — Flow and Interface Description
- SIP-052 — Interface Contract Evolution
- SIP-053 — Governance and Jurisdictional Authority Description
- SIP-054 — Implementation Conformance Model
- SIP-055 — Architectural Element Conformance Classification
- SIP-056 — RFP Traceability Map
- SIP-057 — Requirement-to-Specification Traceability
- SIP-058 — Incomplete Requirement Disclosure

Notes for Editors

This annex contains the authoritative requirement records. Statements displayed elsewhere in the RFP should be transcluded from the corresponding Annex C pages.

Requirement identifiers remain stable. Do not renumber existing requirements when inserting a related requirement. Use an alphabetic suffix when necessary to preserve established identifiers.

The two Indexmenu statements read the same namespace. Each uses a `skipfile+` expression to exclude the other requirement family.

Requirement filenames begin with either `gpr-` or `sip-`, followed by the three-digit requirement number and short title.

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Last update: **2026/09/15 14:24**

