

The SOA Source Book

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Service-Oriented Architecture

The Open Group Service Integration Maturity Model (OSIMM) Version 2

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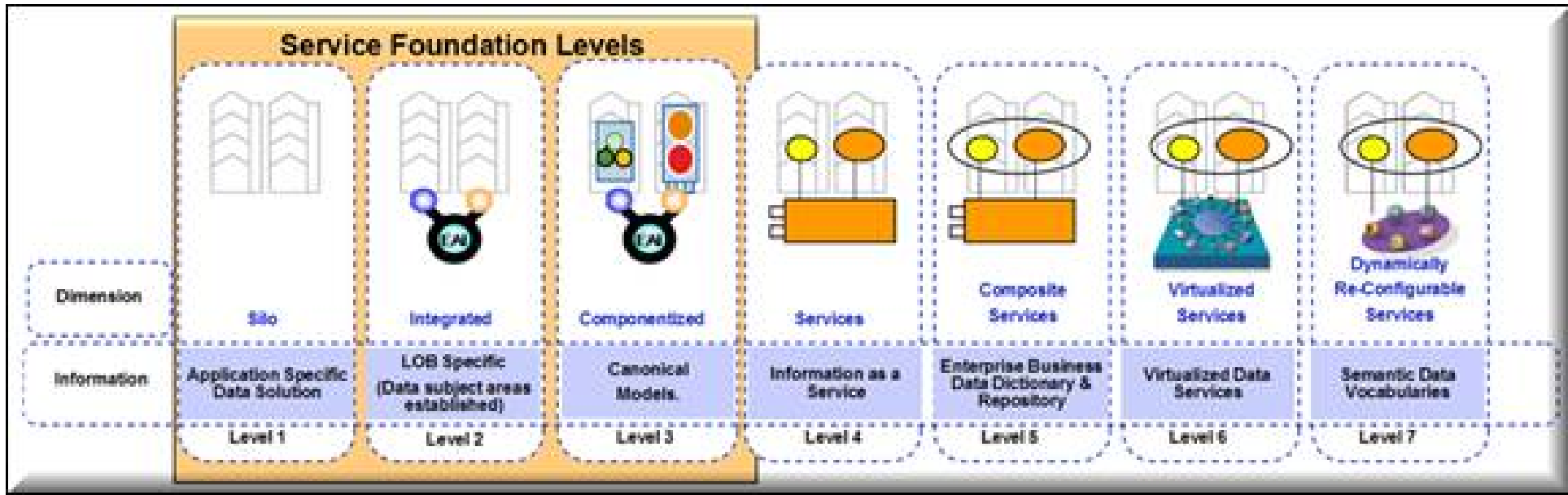
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The Open Group Service Integration Maturity Model (OSIMM) Version 2 – Information Dimension: Base Model

This chapter defines the base model for the OSIMM Information dimension base model. The base model defines a set of generic maturity indicators and attributes that can be used to assess an organization’s SOA maturity level against the OSIMM maturity matrix. Additional maturity indicators, assessment questions, and attribute mappings can be added by vendors or user organizations to extend the base OSIMM model.

The assessment questions that follow help elicit the level of formality to which an organization has successfully applied SOA application (or system) design, development, and deployment principles and adopted SOA-enabling technologies such as an ESB and service registry. Maturity ranges from application-specific data solution to semantic data vocabularies.



OSIMM Information Dimension

Information Dimension: Base Model Maturity Indicator

The base OSIMM model provides one of many possible maturity indicators per dimension. Organizations, vendors, and consultants can provide additional maturity indicators, assessment questions, and attribute mappings to provide additional guidance necessary for the maturation of an organization’s SOA.

The following Information dimension maturity indicator is provided as part of the base OSIMM specification:

- An SOA maturity assessment of the OSIMM Information dimension can be conducted by identifying the information architecture that supports a master data model (federated data service) and implements a common business data vocabulary.

Information Dimension: Assessment Questions

By gathering information using these assessment questions, an assessor can map a maturity indicator to the associated maturity attributes, thereby determining the Information dimension maturity level.

1. Is there a common data model across all applications?
2. Are there independent data models for different applications?
3. Are mapping rules used to convert between different data models?
4. Is there difficulty in moving data from one application to another? For all applications? For only some applications?
5. Does your organization have a common data model, (or mappings between multiple data models)? How is this defined? By programming objects in APIs? By XSD schemas? By written documents? By other computer-based modeling tools? By other non-computer-based modeling tools?
6. Are the data models in the form of Business Object Models, understandable to and owned by, the business, or as IT object models, understandable only to, and owned by, the IT teams?
7. If there are mapping rules across different models, are these understandable to and maintained by the business or by IT staff? Are such mapping rules performed by the infrastructure?
8. Are the data models defined by a language that includes taxonomies, ontologies, or other high-level logical representations?
9. Do you maintain a global directory or database of data objects, with global identifiers? Or do you have mechanisms for mapping these objects between different databases/directories? Are these mechanisms electronic or manual? Are all such objects mapped, or is this done only for certain applications and sets of objects? Are these mappings undertaken automatically by the infrastructure?
10. Do you have mechanisms for looking up global objects by searching on their characteristics?
11. How is the transformation of data between applications achieved? Is an ESB used to perform the transformation? Is this achieved by bespoke adapters as required? Or via a comprehensive set of APIs? Or by calling a service?
12. Are there facilities for performing complex inference in order to map data defined in ontologies from one form to another? Does a master data service exist?
13. Does your organization have or are you developing a Business Information Model to standardize data and message formats and concepts across the enterprise?

Information Dimension: Maturity Indicator-to-Attribute Mapping

The following are the base set of maturity indicators for the OSIMM Information dimension. Each maturity indicator is associated with a set of maturity attributes. Maturity attributes are those observed characteristics of a maturity indicator for each maturity level. The assessment questions are used to survey an organization’s Information dimension. Survey data obtained through the Information dimension assessment questions is used to determine the maturity level by assessing the data and matching to the maturity attributes that best fit the data obtained. The maturity weighting is used to determine an average maturity score across multiple maturity indicators. The model can be extended by adding additional maturity indicators and assigning weighting to the indicator by maturity level according to the value placed on the maturity indicator by the assessing organization.

Maturity Indicators for the Information Dimension

Maturity Level Cell Name	Maturity Indicator	Maturity Attributes	Maturity Weighting	Assessment Question Mapping
Silo (Level 1) <i>Application-specific Data Solution</i>	The information architecture supports a master data model that implements a common business data vocabulary.	Low or nonexistent Information is replicated and redundant. Conceptual enterprise information model is absent.	10	1, 2, 3, 4, 5
Integrated (Level 2) <i>LOB or Enterprise-specific</i>	The information architecture supports a master data model that implements a common business data vocabulary.	Limited Information is shared across some applications using Extraction, Transformation, Load, Manipulate (ETLM) or message-oriented technologies. Initial data vocabularies are beginning to emerge.	20	1, 2, 3, 4, 5, 11
Componentized (Level 3) <i>Canonical Models</i>	The information architecture supports a master data model that implements a common business data vocabulary.	Cross-organizational Business data vocabularies have emerged but are application or system-specific. Formal business information models have emerged, often accessed through XML schema style interfaces.	30	1, 2, 3, 4, 5, 6 8, 13
Services (Level 4) <i>Information as a Service</i>	The information architecture supports a master data model that implements a common business data vocabulary.	Enterprise-wide Multiple business units are using meta-data relationships. Business data vocabularies are standardized within a business unit or process area. Business data can be shared within a business unit and with business partners in a consistent manner. Interfaces are defined using common message data vocabularies.	40	5, 7 6 8, 13
Composite Services (Level 5) <i>Business Data Dictionary and Repository</i>	The information architecture supports a master data model that implements a common business data vocabulary.	Integrated Enterprise-wide Information services are in place such as data validation, data cleansing, data transformation, partner data integration, or others. Master data services are in place and are utilized across the enterprise. Business data vocabularies are standardized for use across the enterprise.	50	7, 8, 9, 10 11, 12 13
Virtualized Services (Level 6) <i>Virtualized Information Services</i>	The information architecture supports a master data model that implements a common business data vocabulary.	Integrated across the enterprise and externally between business partners. Business data vocabularies can be expanded and enhanced as required to support new services, external partners, and business process reconfiguration. A registry with metadata is used to manage enterprise service assets. A formal enterprise-wide business information model has been developed and deployed.	60	7, 8, 9 10, 11, 12 13
Dynamically Re-Configurable Services (Level 7) <i>Semantic Data Vocabularies</i>	The information architecture supports a master data model that implements a common business data vocabulary.	Adaptive Enterprise Business data vocabularies can easily be expanded and enhanced as required to support new services, external partners, and business process reconfiguration. Business data is defined using semantic web constructs, or ontologies (e.g., UN/CEFACT Core Components, ISO 11179). A formal enterprise business information model has been designed and implemented that includes both enterprise and external relationship entities.	70	1, 2, 3, 4, 5, 6, 7, 8, 9 8, 9, 10, 11, 12 13

⇒ [Infrastructure & Management Dimension: Base Model](#)