MDG Technology for TOGAF User Guide

Welcome to the MDG Technology for TOGAF. The MDG Technology for TOGAF enables Enterprise Architect users to benefit from The Open Group Architecture Framework, within a powerful modeling environment that is based on open standards.

SPARX SYSTEMS

MDG Technology for TOGAF User Guide

Introduction

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by Nithiya Ugavina

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All the people who have contributed suggestions, examples, bug reports and assistance in the development of MDG Technology for TOGAF. The task of developing and maintaining this tool has been greatly enhanced by their contribution.

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Foreword

Welcome to the MDG Technology for TOGAF User Guide. The MDG Technology for TOGAF enables you to benefit from The Open Group Architecture Framework within a powerful modeling environment based on open standards.

1 Welcome

Welcome to the MDG Technology for TOGAF - Enterprise Architect MDG Add-In, Version 1.0.

The Add-In enables users of Enterprise Architect to benefit from The Open Group Architecture Framework (TOGAF) within a powerful modeling environment based on open standards.

About TOGAF

The Open Group Architecture Framework (TOGAF) is one of the most widely accepted methods for developing enterprise architecture. TOGAF is an open framework providing a practical, definitive and proven step-by-step method for developing and maintaining enterprise architecture.

The key to TOGAF remains a reliable, practical method - the TOGAF Architecture Development Method (ADM) - for defining business needs and developing an architecture that meets those needs, applying the elements of TOGAF and other architectural assets available to the organization.

TOGAF embodies the concept of the Enterprise Continuum to reflect different levels of abstraction in an architecture development process. In this way TOGAF facilitates understanding and co-operation between actors at different levels. It provides a context for the use of multiple frameworks, models, and architecture assets in conjunction with the TOGAF ADM. By means of the Enterprise Continuum, architects are encouraged to leverage all other relevant architectural resources and assets, in addition to the TOGAF Foundation Architecture, in developing an organization-specific IT architecture.

For detailed information on TOGAF, visit http://www.opengroup.org/.

Benefits of MDG Technology for TOGAF

- Helps align business processes and IT to the business strategies and goals
- Provides support for all the phases in the ADM
- Provides support for visual modeling of As-Is and To-Be architecture
- Provides support for modeling all four architecture domains specific to TOGAF (Business, Application, Data and Technology)
- Provides support for the report generation of TOGAF work products
- Provides out-of-box FEA reference models.

MDG Technology for TOGAF Features

- A visual clickable Interface for ADM
- Useful starter model to help you become productive quickly.
- UML profiles for FEAF Business, Performance, Service and Technical Reference Models.
- Efficient relationship management for model artifacts with Enterprise Architect's Relationship Matrix and Hierarchy View.
- Links to external files, audit log and report generation features of Enterprise Architect provide additional capability for the Add-In in maintaining and managing your enterprise architecture.

Getting Started

For instructions on how to start using the MDG Technology for TOGAF, see Getting Started 10 and Using the MDG Technology for TOGAF 11.

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Trademarks of the OMG

- OMG™
- Object Management Group™
- UML™
- Unified Modeling Language™

Trademarks of The Open Group

- TOGAF™

1.4 Support

Technical support for the MDG Technology for TOGAF is available to registered users of Enterprise Architect. Responses to support queries are sent by email. Sparx Systems endeavors to provide a rapid response to all product-related questions or concerns.

Registered users can lodge a support request, by visiting:
http://www.sparxsystems.com/registered/reg_support.html.

Trial users can contact Sparx Systems with questions regarding their evaluation at:
support@sparxsystems.com.

An online user forum is also available for your questions and perusal, at
http://www.sparxsystems.com/cgi-bin/yabb/YaBB.cgi.

1.5 System Requirements

MDG Technology for TOGAF runs under the following environments:

Operating Systems Supported

- Windows XP Professional.
- Windows XP Home.
- Windows XP Media Edition.
- Windows XP Tablet Edition.
- Windows NT® (SP5 or later).
- Windows ME.
- Windows 2000 Professional (SP3 or later).
- Windows Vista (32 bit)

Enterprise Architect Versions Supported

- Enterprise Architect Professional, Version 7.1.827 (or later)
- Enterprise Architect Corporate, Version 7.1.827 (or later)

2 Getting Started

When you install the MDG Technology for TOGAF into Enterprise Architect, the program is enabled and ready for use.

Access the MDG Technology For TOGAF

1. Create a new Enterprise Architect project file, and click on the top-level package.
2. Select the **Add-Ins | TOGAF | Insert New Framework Model** menu option.
3. In the **Name** field, type a name for the model.
4. Click on the **OK** button.

A new base TOGAF model is created, displaying the TOGAF Interface diagram 12.

3 Using the MDG Technology for TOGAF

The MDG Technology for TOGAF provides a model-based framework for planning, designing and implementing the Architecture for an Enterprise. The starter model provided with the Add-In acts as a base upon which you can build the Enterprise Architecture. You can create the appropriate diagrams from the extended Enterprise Architect UML diagram set, using Toolbox pages that support every phase of the TOGAF Interface Diagram. You can also align models across the phases of the Architecture Development Method (ADM) using the Enterprise Architect Relationship Matrix.

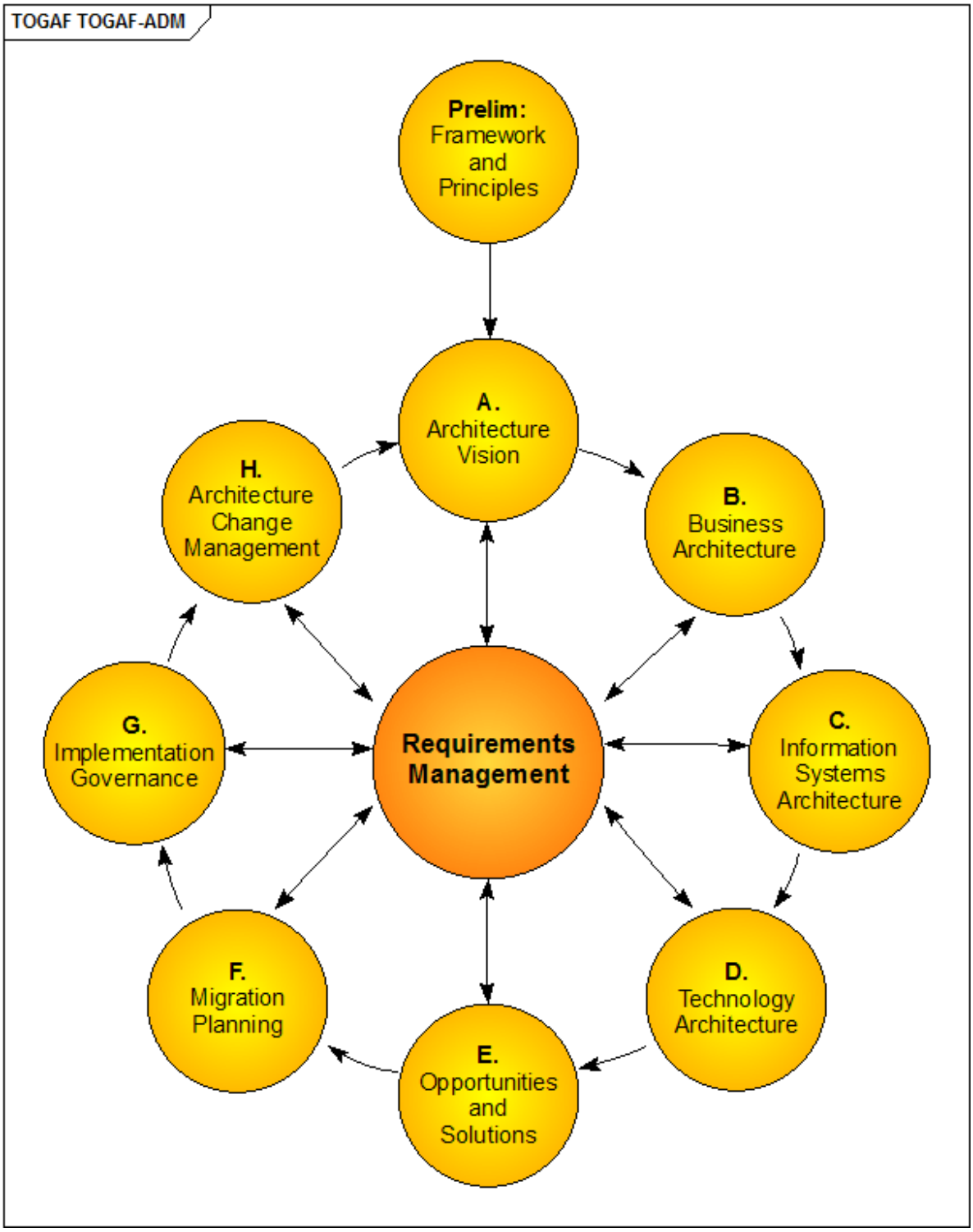
This chapter describes the:

Note that the MDG Technology For TOGAF is integrated with the features of Enterprise Architect, which are documented in the *Enterprise Architect User Guide*.

3.1 The TOGAF Interface Diagram

In Enterprise Architect, the TOGAF Framework is presented as a predefined model. The model-level diagram of this model structure [13] is the TOGAF Interface diagram (illustrated below), which serves as user interface for the development of Enterprise Architecture based on TOGAF.

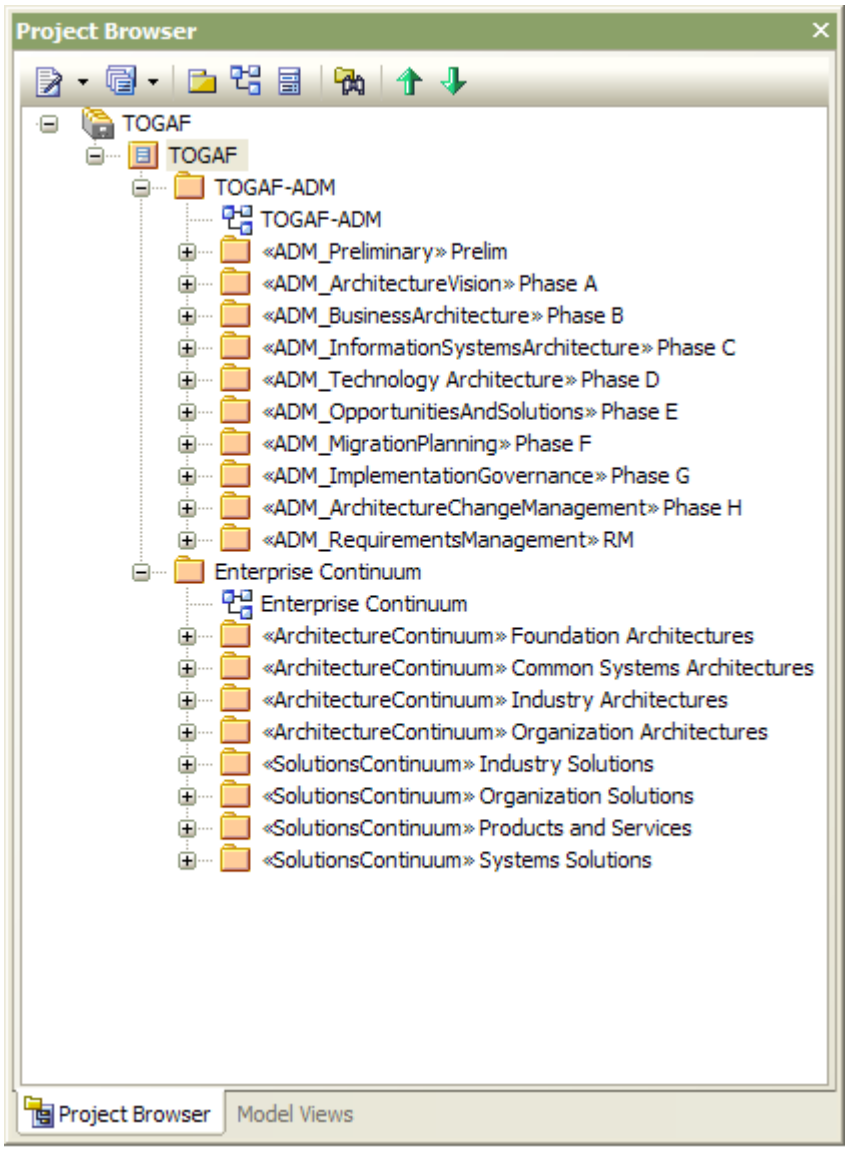
Double-clicking on a cell of the interface diagram opens the model package and diagram corresponding to that particular ADM phase.



3.2 The TOGAF Model Structure

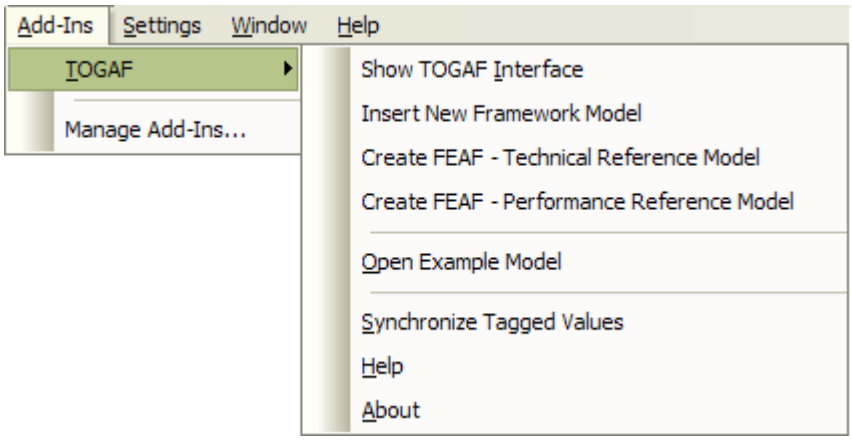
This topic defines the structure of the TOGAF Framework model template.

Each ADM phase is modeled as the highest-level package inside the Framework model.



3.3 The TOGAF Add-In Menu

The MDG Technology for TOGAF menu is available from the **Add-Ins** menu on the Enterprise Architect main menu bar.



The menu options are defined below:

Menu Option	Use To
Show TOGAF Interface	Open the TOGAF interface diagram of the model.
Insert New Framework Model	Create a new TOGAF template model under the selected package.
Create FEAF - Technical Reference Model	Create the Technical Reference Model specific to Federal Enterprise Architecture Framework (FEAF) – Version 2.3.
Create FEAF - Performance Reference Model	Create the Performance Reference Model specific to Federal Enterprise Architecture Framework (FEAF) – Version 2.3
Open Example Model	Load the example TOGAF model.
Synchronize Tagged Values	Add missing Tagged Values to all elements in the model that require them. Select this option whenever a new element is created by any means other than directly dropping the element from the TOGAF Toolbox pages. Also select this option before using a new version of the Add-In, to update the Tagged Values of elements in existing models to the latest version of the TOGAF profile. See Synchronize Tags And Constraints in the *Enterprise Architect User Guide* .
Help	Open the TOGAF Help file.
About	Display the version information for the MDG Technology for TOGAF.

Troubleshooting:

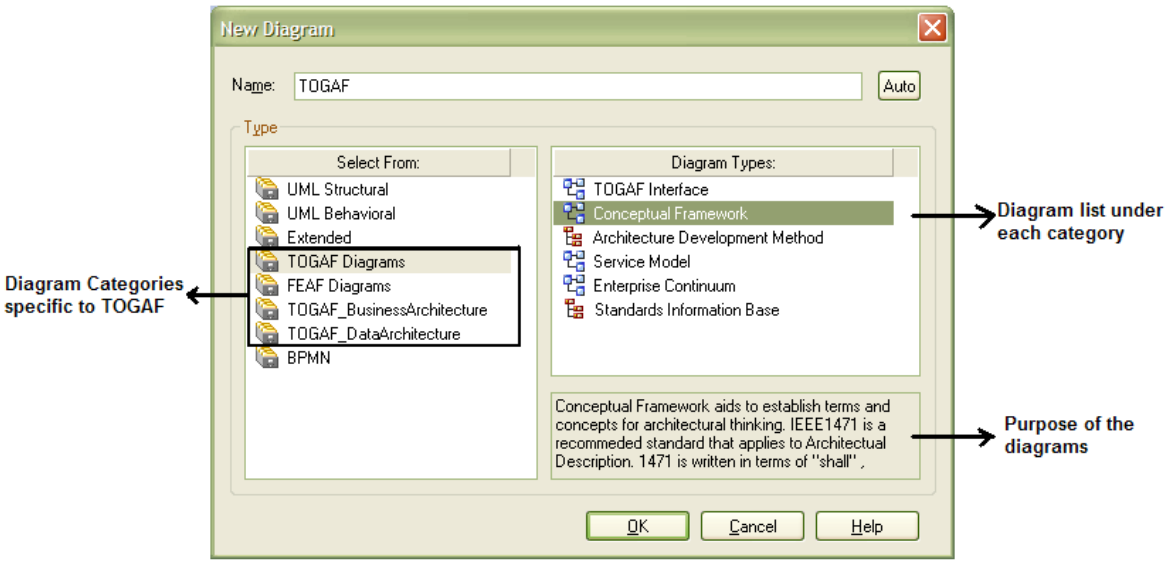
If either the **Add-Ins** menu or the **TOGAF Technology** sub-menu is not visible after installing the TOGAF Add-In, try:

- Selecting the **Add-Ins | Manage Add-Ins** menu option and ensuring that you have selected the TOGAF **Load on Startup** checkbox on the Manage Add-Ins dialog.
- Resetting Enterprise Architect's menus with the **View | Visual Layouts | Default Layout** menu option.

3.4 The TOGAF Diagrams

The MDG Technology for TOGAF introduces new diagram types into Enterprise Architect that support modeling of TOGAF. TOGAF-specific diagrams can be created in the same way as for any other diagram in Enterprise Architect; see the *Enterprise Architect User Guide* for further details.

When you open a TOGAF diagram, Enterprise Architect automatically opens the appropriate Toolbox 16 pages 16 for that diagram.



3.5 The TOGAF Toolbox Pages

The MDG Technology For TOGAF Toolbox pages provide elements and relationships for all the TOGAF diagrams supported by the MDG Technology for TOGAF. The pages can be accessed by selecting the **More tools | TOGAF** option at the top of the Enterprise Architect UML Toolbox.

When you open a TOGAF diagram, Enterprise Architect opens the Toolbox pages that are most useful for that particular diagram type. In addition, the Common page of elements and relationships displays, regardless of which diagram is open.

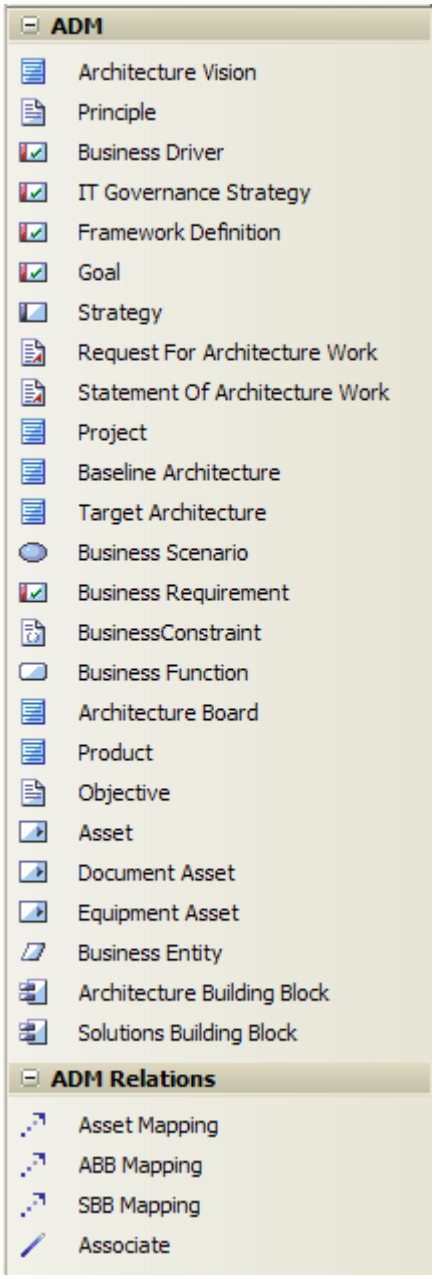
The Enterprise Architect UML Toolbox pages can be docked on either side of the diagram, or free floated on top of the diagram to expose more surface for editing.

See the following Toolbox page descriptions:

The TOGAF Toolbox page menu also provides access to the standard Enterprise Architect *Use Case*, *Class* and *Data Modeling* Toolbox pages. Please refer to the online *Enterprise Architect User Guide* for descriptions of these pages.

3.5.1 Architecture Development Method Toolbox Page

Architecture Development Method (ADM) elements are used to define and model the TOGAF specific primitives in all the phases of ADM. These enable you to define the scope of the architecture.



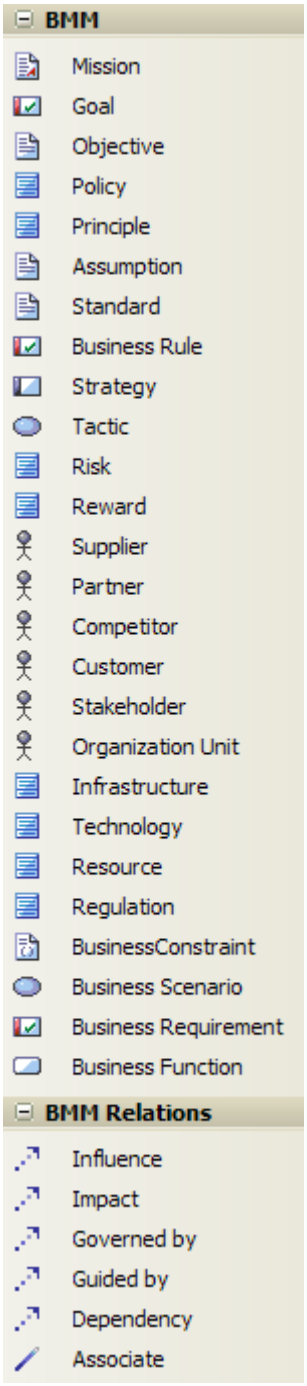
Item	Description
Architecture Vision	Articulates a vision that enables the business goals, responds to the strategic drivers, conforms with the principles, and addresses the stakeholder concerns and objectives. *Tagged Values* – ID, Scope and Version
Principle	Defines and guides the organization, for the use of all assets and resources across the enterprise. Each Principle should be linked to the relevant business objective and key architecture drivers. *Tagged Values* – ID, Implications, Rationale, Statement, Type and Version
Business Driver	Defines the business driver in the **Name** field. *Tagged Values* – ID and Version
IT Governance Strategy	Defines the strategy statement for IT governance. *Tagged Values* – ID and Version
Framework Definition	A textual description of the Framework. *Tagged Values* – ID and Version
Goal	Captures what is to be achieved by the enterprise, with specifications defined by the Tagged Values. *Tagged Values* – Assumption, Critical Success Factor, Goal Type, ID, Key Performance Indicator, Measure, Unit Responsible, Opportunity, Strength, Threat and Weakness
Strategy	Captures the strategy statements for the business plan. *Tagged Values* – Action Plan, Estimated Budget, Estimated Time Period, ID, Measure and Target Value
Request for Architecture Work	Captures the information for the Request for Architecture Work, a major input for the ADM phases. This element is designed as a *Document Artifact*. On creating a new element of this type, double click the element to open the linked document and select the **TOGAF - Request for Architecture Work** template from the list of templates available for the **Copy Template** option. *Tagged Values* – ID, Architecturing Organization and Sponsoring Organization
Statement of Architecture Work	Captures the information for the Statement of Architecture Work, a major output for the ADM phases. This element is designed as a *Document Artifact*. On creating a new element of this type, double click the element to open the linked document and select the **TOGAF – Statement of Architecture Work** template from the list of templates available for the **Copy Template** option. *Tagged Values* – ID, Version

Item	Description
Project	Captures the information to define a planned endeavor undertaken to create a product or service *Tagged Values* – ID, FutureDirections, Introduction, ProjectDevelopment Process Overview, References and Target Architecture(s) Mapping
Baseline Architecture	Captures the very high-level definitions of the baseline environment from a business information systems and technology perspective. The scope and level of detail to be defined depends on the extent to which existing architecture elements are likely to be carried over into the Target Architecture. *Tagged Values* – ID, Type and Version
Target Architecture	Captures the very high-level definitions of the target environment, from a business information systems and technology perspective. *Tagged Values* – ID, Type and Version
Business Scenario	Identifies and clarifies business needs, and thereby derives the business requirements that the architecture development has to address. Creating a business scenario involves the following steps: 1. Identifying, documenting, and ranking the problem driving the scenario. 2. Identifying the business and technical environment of the scenario and documenting it in scenario models. 3. Identifying and documenting desired objectives. 4. Identifying the human actors (participants) and their place in the business model. 5. Identifying computer actors (computing elements) and their place in the technology model. 6. Identifying and documenting roles, responsibilities, and measures of success per actor; documenting the required scripts per actor, and the results of handling the situation. 7. Checking for 'fitness-for-purpose' and refining only if necessary. A linked document template for Business Scenario is provided by the Add-In. To use the template, right-click the element and select the Edit **Linked Document** menu option. Select **TOGAF – Business Scenario/Architecture Vision** for the **Copy template** option. *Tagged Value* – ID
Business Requirement	Captures the requirements the business should meet to be successful. *Tagged Value* – ID
Business Constraint	Captures the restrictions and limitations on the business. *Tagged Value* – ID
Business Function	Captures the major functions performed by the enterprise or a part of the enterprise. *Tagged Value* – ID
Architecture Board	Captures the definition for a cross-organization Architecture Board. This is a key element in a successful architecture governance strategy, to oversee the implementation of the strategy. This body should be representative of all the key stakeholders in the architecture, and typically comprises a group of executives responsible for the review and maintenance of the overall architecture. *Tagged Values* – ID, Authority Limits and Responsibilities
Product	Captures the information of a product produced by the enterprise. *Tagged Value* – ID
Objective	Captures the attainable, time-targeted, and measurable target that the enterprise seeks to meet in order to achieve its goals. *Tagged Value* – ID
Asset	Captures the enterprise resources that could be estimated for value. *Tagged Values* – ID, AssetValue and Description
Document	Subtype of Asset to capture the important document resources of the enterprise.

Item	Description
Asset	*Tagged Values* – ID, AssetValue and Description
Equipment Asset	Subtype of Asset to capture the equipment resources of the enterprise. *Tagged Values* – ID, AssetValue and Description
Business Entity	Generic element to capture enterprise resources. *Tagged Values* – ID and Description
Architecture Building Block	(ABB) Relates to the Architecture Continuum, and is defined or selected as a result of the application of the ADM. *Tagged Values* – ID, Description, Owning Organization, Rationale, ServicePortfolio
Solutions Building Block	(SBB) Relates to the Solutions Continuum, and can be either procured or developed. *Tagged Values* – ID, Description, Supplier Organization

3.5.2 Business Motivation Model Toolbox Page

The Business Motivation Model Toolbox page is based on the OMG specification for Business Motivation Model (BMM). These elements provide a structure for developing, communicating, and managing business plans in an organized manner. (For further information on BMM visit http://www.omg.org/technology/documents/br_pm_spec_catalog.htm.)



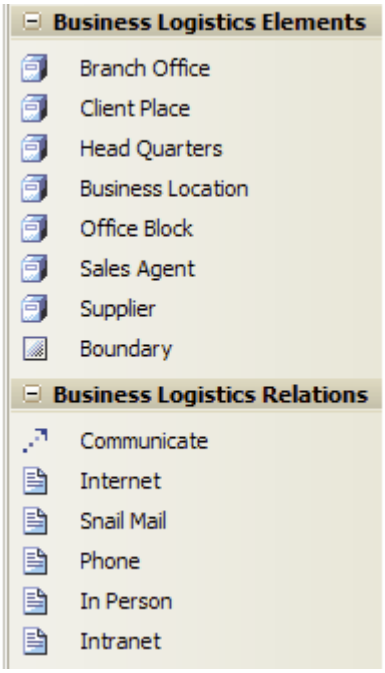
Item	Description
Mission	Captures the mission statement, policies and values of the enterprise. *Tagged Value* – ID
Goal	An end state or condition of the enterprise to be brought about or sustained through appropriate means. *Tagged Values* – Assumption, Critical Success Factor, Goal Type, ID, Key Performance Indicator, Measure, Unit Responsible, Opportunity, Strength, Threat and Weakness
Objective	Quantifies a Goal, and provides the basis for measures to determine that progress is being made towards the Goal. *Tagged Value* – ID
Policy	Captures the policy definitions followed in the enterprise. *Tagged Value* – ID
Principle	Defines and guides the organization, for use of all assets and resources across the enterprise. Each Principle should be linked to the relevant business objective and key architecture drivers. *Tagged Values* – ID, Implications, Rationale, Statement, Type and Version
Assumption	Captures the assumptions made in information manipulation. *Tagged Values* – ID, Rationale, Statement and Type
Standard	Defines the standards followed in the enterprise. *Tagged Values* – ID, Statement and Type
Business Rule	Captures the Business Rule statements. *Tagged Values* – ID, Name, Description, Effective_From, Expiry_From, Status and Version
Strategy	A course of action that is an element of a plan devised through the science and art of business leadership exercised to ensure the most advantageous conditions. *Tagged Values* – Action Plan, Estimated Budget, Estimated Time Period, ID, Measure and Target Value
Tactic	A course of action that is a device or expedient to be employed as part of a Strategy. Implements Strategies and can effect the enforcement level for Business Rules.
Risk	A potential impact that indicates the possibility of loss, injury, disadvantage or destruction. *Tagged Value* – ID

Item	Description
Reward	A potential impact that indicates the probability of gain. *Tagged Value* – ID
Supplier	An external Influencer that is a role played by an individual or enterprise that can furnish or provide products or services to the subject enterprise. *Tagged Value* – ID
Partner	An external influencer that is an enterprise that shares risks and profit with the subject enterprise (or is associated with the subject enterprise to share risks and profit) because this is mutually beneficial. *Tagged Value* – ID

Item	Description
Competitor	An external Influencer that is a role played by an individual or enterprise that poses a challenge for the subject enterprise. *Tagged Value* – ID
Customer	An external Influencer that is a role played by an individual or enterprise that has investigated, ordered, received, or paid for products or services from the subject enterprise. *Tagged Value* – ID
Stakeholder	Captures the actors interested and involved in the enterprise. *Tagged Value* – ID
Organization Unit	Represents any recognized association of people in the context of the enterprise. In a hierarchical structure, it might be the corporation, a division, a department, a group or a team. *Tagged Values* – ID and PersonInCharge
Infrastructure	An internal Influencer that is the basic physical and organizational structures and facilities required for the operation of the enterprise. *Tagged Value* – ID
Technology	An external Influencer that is caused by developments in and limitations of technology. *Tagged Value* – ID
Resource	An Asset that is consumed in the operations of the enterprise and replenished. An internal Influencer that is a stock or supply of money, materials, staff and other assets that can be drawn on by an enterprise in order to function effectively. *Tagged Value* – ID
Regulation	An external influencer that is an order prescribed by an authority such as a government body or the management of an enterprise. *Tagged Value* – ID
Business Scenario	Identifies and clarifies business needs, and thereby derives the business requirements that the architecture development has to address. Creating a business scenario involves the following steps: 1. Identifying, documenting, and ranking the problem driving the scenario. 2. Identifying the business and technical environment of the scenario and documenting it in scenario models. 3. Identifying and documenting desired objectives. 4. Identifying the human actors (participants) and their place in the business model. 5. Identifying computer actors (computing elements) and their place in the technology model. 6. Identifying and documenting roles, responsibilities, and measures of success per actor; documenting the required scripts per actor, and the results of handling the situation. 7. Checking for 'fitness-for-purpose' and refining only if necessary. A linked document template for Business Scenario is provided by the Add-In. To use the template, right-click the element and select **Edit Linked Document**; select **TOGAF – Business Scenario/Architecture Vision** for the **Copy template** option. *Tagged Value* – ID
Business Requirement	Captures the business requirement information. *Tagged Value* – ID
Business Constraint	Captures the constraints on business. *Tagged Value* – ID
Business Function	Captures the major functions performed by the enterprise or a part of the enterprise *Tagged Value* – ID

Item	Description
Influence	Connector. Represents the relationship between the external and internal influencers with the ends and means of the Business Motivation Model.
Impact	Connector. Captures the relationship that directly or indirectly affects the ends and means of the Business Motivation Model.
Governed by	Connector. Indicates the relationship between a Business Process and a governing Business Policy.
Guided by	Connector. Indicates the relationship between a Business Process and a guiding business rule.

3.5.3 Business Logistics Toolbox Page

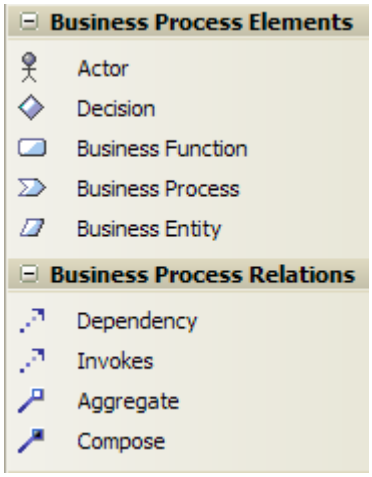


Item	Description
Branch Office	Subtype of Business Location.
Client Place	Subtype of Business Location.
Head Quarters	Subtype of Business Location.
Business Location	Models the location from which the business operates.
Office Block	Subtype of Business Location.
Sales Agent	Subtype of Business Location.
Supplier	Subtype of Business Location.
Communicate	Indicates that a business location communicates directly with another business location.
Internet	Indicates that the means of communication is the World Wide Web.
Snail Mail	Indicates that the means of communication is the postal system or courier services.
Phone	Indicates that the means of communication is the telephone.
In Person	Indicates that the means of communication is direct person-to-person.
Intranet	Indicates that the means of communication is the local intranet or WAN.

Note:

Elements and connectors common to Enterprise Architect UML and Extended diagrams are not documented here. See the *Enterprise Architect User Guide* for information on these.

3.5.4 Business Process Toolbox Page



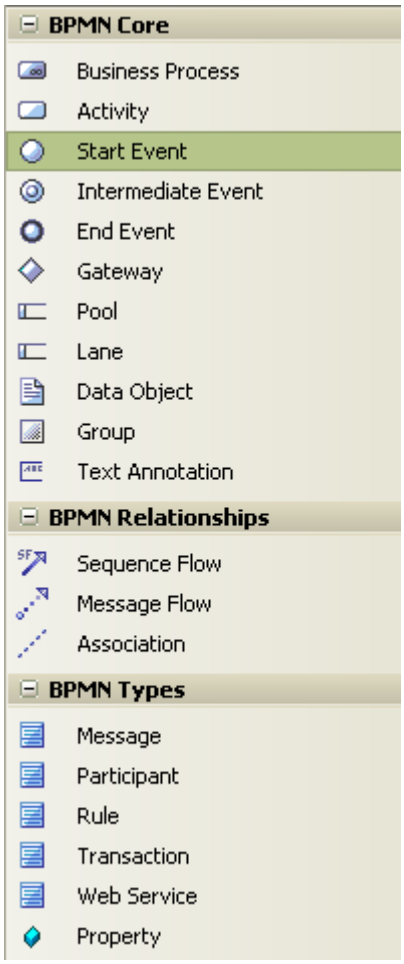
Item	Description
Actor	Models a stakeholder or any other human resource of the Enterprise.
Decision	Indicates point of conditional progression where a business decision is taken.
Business Function	A major function performed by the Enterprise or a part of the Enterprise.
Business Process	A function or behavior of the Enterprise or part of the Enterprise.
Business Entity	Generic element to capture Enterprise resources.
Invokes	Relationship that defines the invocation of a business process.

Note:

Elements and connectors common to Enterprise Architect UML and Extended diagrams are not documented here. See the *Enterprise Architect User Guide* for information on these.

3.5.5 BPMN Toolbox Page

The BPMN Toolbox pages provide the graphical (Core) and non-graphical (Types) Business Process Modeling Notation (BPMN) elements for use on business process diagrams. Specifications of these elements and relationships are defined by Tagged Values.



Item	Description
Business Process	An extension of a *composite Activity* that defines a business process.
Activity	Defines an activity within a business process.
Start Event	Defines the initiating event in a process.
Intermediate Event	Defines an intermediate event in a process.
End Event	Defines the terminating event in a process.
Gateway	Defines a decision point in a business process. If a condition is true, then processing continues one way; if not, then another.
Pool	An extension of a *Partition* element, used to logically organize an Activity.
Lane	An extension of a *Partition* element, used to subdivide a Pool.
Data Object	An extension of an *Artifact* element, used to define a physical piece of information used or produced by a system.
Group	An extension of a *Boundary* element, used to group other elements.
Text Annotation	A comment.
Sequence Flow	An extension of a *Control Flow* relationship, defining the flow of activity.
Message Flow	An extension of a *Control Flow* relationship, defining the flow of communications in the process.
Association	Used to associate information and artifacts with flow objects.
Message	An extension of a Class element, used to define a message.
Participant	An extension of a Class element, used to define a participant in an activity.

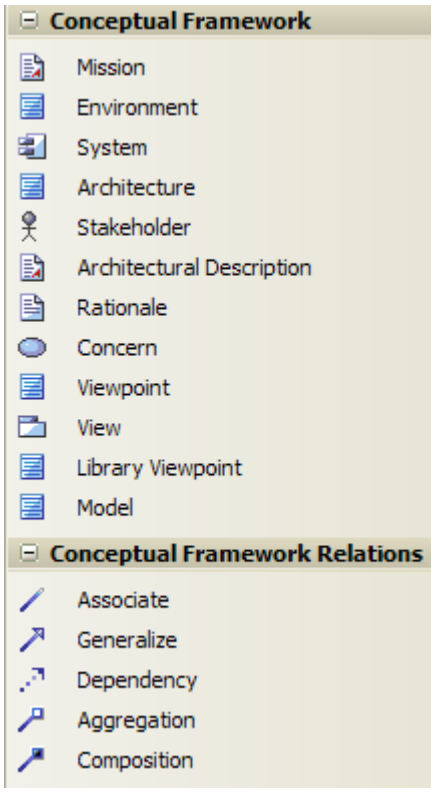
Item	Description
Rule	An extension of a Class element, used to define rule statements.
Transaction	An extension of a Class element, used to define a transaction in an activity.
Web Service	An extension of a Class element, used to define a web service.
Property	An extension of an attribute, to drag onto another element.

Note:

Enterprise Architect is delivered with BPMN Technology automatically installed. This provides a BPMN profile and Toolbox separate from the TOGAF version above. To make further use of BPMN facilities, download the BPMN Add-In from: http://www.sparxsystems.com/products/mdg_bpmn.html.

3.5.6 Conceptual Framework Toolbox Page

The Conceptual Framework Elements are used to model the architectural descriptions and to establish concepts for architectural thinking. The Toolbox element design is based on IEEE standard 1471 - 2000.



Item	Description
Mission	Captures the mission statement, policies and values of the enterprise. *Tagged Value* – ID
Environment	Defines the developmental, operational, programmatic context of the system for the purpose of Enterprise Engineering work. *Tagged Value* – ID
System	Captures details of a working component of the enterprise. System includes, for example, application, system, platform, system -of-systems, enterprise and product line. *Tagged Value* – ID
Architecture	Captures the definition of the Architecture work.

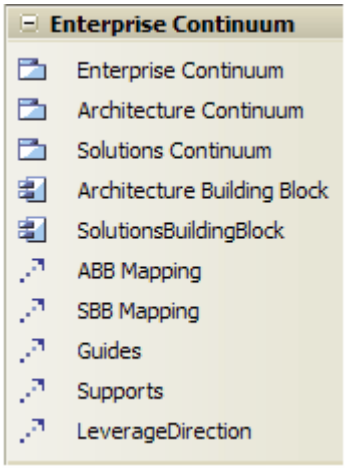
Item	Description
	Tagged Value – ID
Stakeholder	Captures the actors interested and involved in the enterprise. *Tagged Value* – ID
Architectural Description	Captures the definition of Architectural Descriptions. An Architecture Description identifies the system's stakeholders and their concerns. *Tagged Value* – ID
Rationale	Captures the statement of purpose for the Architectural Description.
Concern	Forms the basis for completeness. An Architectural Description addresses all stakeholders' concerns. Each Concern is addressed by an Architectural View
Viewpoint	A pattern for constructing Views – Viewpoints define the rules on Views. Each View corresponds to exactly one Viewpoint. *Tagged Value* – ID
View	A representation of a whole system from the perspective of a set of concerns. A View can contain one or more architectural models, enabling the View to use multiple notations.
Library Viewpoint	Captures a collection of categorized Viewpoints. *Tagged Value* – ID
Model	Defines and represents a model. *Tagged Value* – ID

Note:

Elements and connectors common to Enterprise Architect UML and Extended diagrams are not documented here. See the *Enterprise Architect User Guide* for information on these.

3.5.7 Enterprise Continuum Toolbox Page

Enterprise Continuum elements are used to model the Architecture Continuum and Solutions Continuum of an enterprise. These elements enable you to create Architecture Building Blocks / Solutions Building Blocks by mapping to the appropriate architecture models / solution models (as diagrams, elements and models).



Item	Description
Enterprise Continuum	A package to model the Enterprise Continuum. *Tagged Values* – ID, Architecturing Organization, Sponsoring Organization
Architecture Continuum	A package to model the Architecture Continuum.

Item	Description
Solutions Continuum	A package to model the Solutions Continuum.
Architecture Building Block	Relates to the Architecture Continuum, and is defined or selected as a result of the application of the ADM. *Tagged Values* – ID, Description, Owning Organization, Rationale, ServicePortfolio
Solutions Building Block	Relates to the Solutions Continuum, and can be either procured or developed. *Tagged Values* – ID, Description, Supplier Organization
ABB Mapping	Connector to map the architectural models and artifacts to the Architecture Building Blocks.
SBB Mapping	Connector to map the solution models and artifacts to the Solutions Building Blocks.
Guides	Connector to represent *guides* relationships. ABBs guide the development of SBBs.
Supports	Connector to represent *supports* relationships. SBBs support the development of SBBs.
Leverage Direction	Connector to represent the direction of leveraging of architecture and solution components.

3.5.8 Organization Chart Toolbox Page

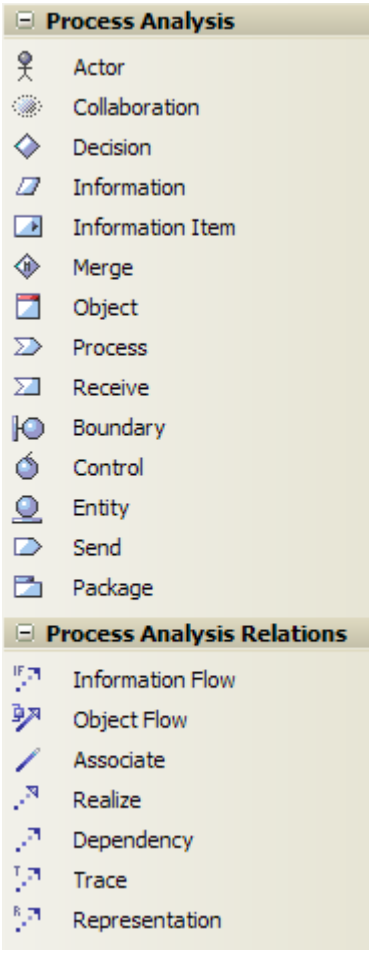
Item	Description
Board of Directors	Captures the details of the board of directors.
StakeHolder	Captures stakeholders of the enterprise.
External Organization	Captures any external business unit that is not under direct control of the enterprise, but has a relationship with the enterprise.
Organization Unit	Captures any business unit that is under direct control of the enterprise.
Personnel	Captures the details of personnel in an enterprise.
In Contract	Captures the contract-based relationships between business units.
Works For	Captures the details of team links; for example, *Stakeholder 1* works for *Organization Unit 1*.
Supervise	Captures process supervision details.
Control	Captures *Unit in charge* or *Person in charge* information.

Note:

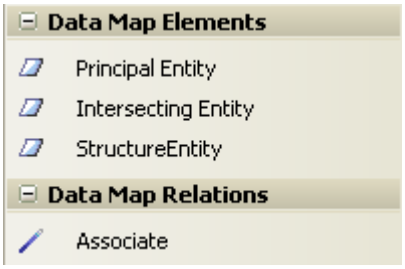
Elements and connectors common to Enterprise Architect UML and Extended diagrams are not documented here. See the *Enterprise Architect User Guide* for information on these.

3.5.9 Process Analysis Toolbox Page

The Process Analysis Toolbox page provides the same elements and connectors as are provided by the Enterprise Architect Analysis Toolbox page. Please refer to this *Enterprise Architect User Guide* topic.



3.5.10 Data Map Toolbox Page



Item	Description
Principal Entity	A business entity that forms a resource of the enterprise.
Intersecting Entity	Normalizes the many-to-many relationship between principal entities.

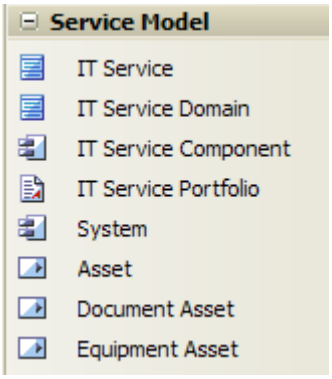
Item	Description
Structure Entity	Captures potential knowledge base entities.

Note:

Elements and connectors common to Enterprise Architect UML and Extended diagrams are not documented here. See the *Enterprise Architect User Guide* for information on these.

3.5.11 Service Model Toolbox Page

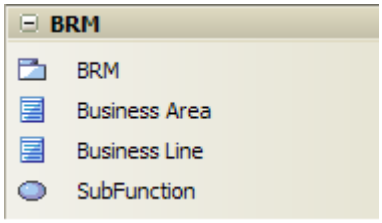
Service Model elements are used to build a conceptual framework that describes the IT Service infrastructure of the enterprise.



Item	Description
IT Service	Captures the IT capability offered as a consumable entity that is managed by the enterprise. *Tagged Values* – ID, DefinitionText, Owner, Availability, Charge_to_User, ContactPoint and Dependent_Systems
IT Service Domain	Categorizes IT services. *Tagged Values* – ID and Description
IT Service Component	Captures a set of capabilities that might be exposed through the technology interface. *Tagged Values* – ID, Rationale
IT Service Portfolio	A Document Artifact that captures the information required to describe an IT service portfolio. *Tagged Value* – ID
System	Captures details of a working component of the enterprise. System includes things such as application, system, platform, system-of-systems, enterprise and product line. *Tagged Value* – ID
Asset	Captures the enterprise resources that could be estimated for value. *Tagged Values* – ID, AssetValue and Description
Document Asset	Subtype of Asset; captures the important document resources of the enterprise. *Tagged Values* – ID, AssetValue and Description
Equipment Asset	Subtype of Asset; captures the equipment resources of the enterprise. *Tagged Values* – ID, AssetValue and Description

3.5.12 Business Reference Model Toolbox Page

The Business Reference Model (BRM) provides a framework facilitating a functional (rather than organizational) view of the enterprise's lines of business (LoBs), including its internal operations and its services.

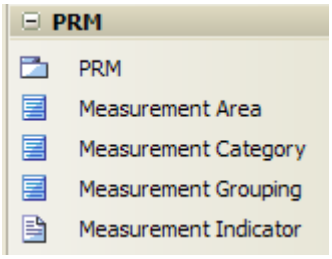


Item	Description
BRM	A package to capture the Business Reference Model. *Tagged Value* – Version
Business Area	The high-level organizing layer of the BRM, capturing high-level categories relating to the business purpose and objectives. *Tagged Values* – BusinessAreaID and Definition
Business Line	Captures the lines of business of the enterprise. *Tagged Values* – BusinessLineID, Definition and Referencing Business Area
SubFunction	Represents the lowest level of granularity in the BRM, grouping functionalities related to each line of business. *Tagged Values* – SubFunctionID, Definition, Referencing BusinessLine and Referencing Business Area

3.5.13 Performance Reference Model Toolbox Page

The Performance Reference Model (PRM) Toolbox page is designed to conform to the specification of the FEAF-PRM framework. The PRM is a framework for performance measurement providing common output measurements throughout the enterprise. It enables agencies to better manage the business at a strategic level, by providing a means for using an agency's Enterprise Architect to measure the success of IT investments and their impact on strategic outcomes.

The PRM facilitates resource-allocation decisions based on comparative determinations of which programs and organizations are more efficient and effective.

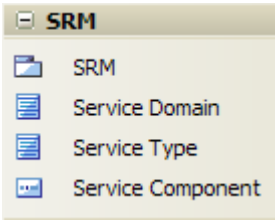


Item	Description
PRM	A package to capture the Performance Reference Model. *Tagged Value* – Version
Measurement Area	The high-level organizing layer of the PRM, capturing aspects of performance at the output levels. This layer is directly linked to the performance objectives established at the agency and program levels. *Tagged Values* – MeasurementAreaID and Definition

Item	Description
Measurement Category	Categorizes measurement area with respect to the attribute or characteristic to be measured. *Tagged Values* – MeasurementCategoryID, Definition and Referencing Measurement Area
Measurement Grouping	Further refines measurement categories into specific types of measurement indicators. *Tagged Values* – MeasurementGroupingID, Definition and Referencing Measurement Category
Measurement Indicator	Captures the specific measures. *Tagged Values* – MeasurementIndicatorID, Definition and Referencing Measurement Grouping

3.5.14 Service Component Reference Model Toolbox Page

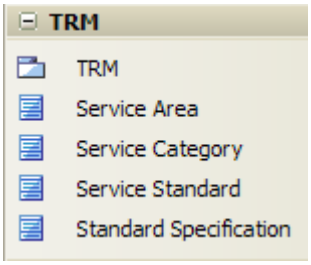
The Service Component Reference Model (SRM) is a business-driven, functional framework classifying Service Components according to how they support business and performance objectives. The model aids in recommending service capabilities to support the reuse of business components and services across the enterprise. The SRM should be structured across horizontal service areas that, independent of the business functions, can provide a leverage-able foundation for reuse of applications, application capabilities, components, and business services.



Item	Description
SRM	A package to capture the Service Component Reference Model. *Tagged Value* – Version
Service Domain	Captures a high-level view of the services and capabilities that support enterprise and organizational processes and applications. *Tagged Values* – ServiceDomainID and Definition
Service Type	Groups similar capabilities in support of the domain, providing an additional layer of categorization that defines the context of a specific capability component within a given domain. *Tagged Values* – ServiceTypeID, Definition and Referencing Service Domain
Service Component	Captures a set of capabilities that might be exposed through a business or technology interface. Service Components are 'building blocks' to deliver the information management capability to the business. *Tagged Values* – ServiceComponentID, Definition, Referencing Service Domain and Referencing Service Type

3.5.15 Technology Reference Model Toolbox Page

The Technology Reference Model (TRM) is a component-driven, technical framework categorizing the standards and technologies to support and enable the delivery of Service Components and capabilities.

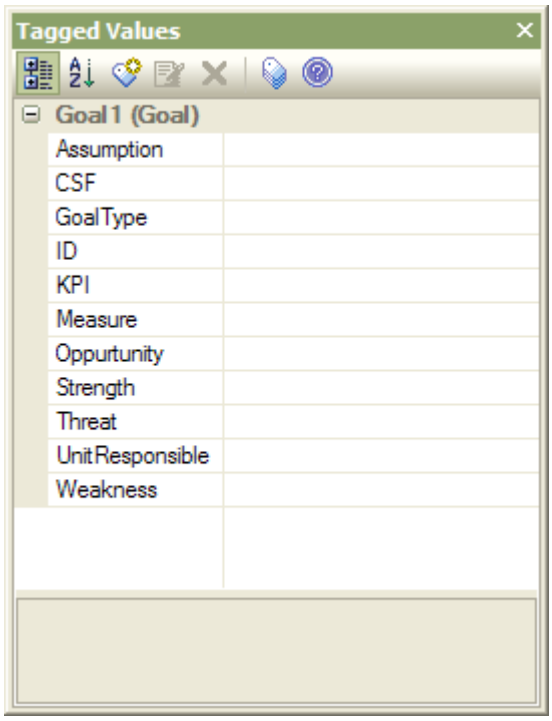


Item	Description
TRM	A package to capture the Technology Reference Model. *Tagged Value* – Version
Service Area	Represents a technical tier supporting the secure construction, exchange, and delivery of a Service Component. *Tagged Values* – ServiceAreaID and Definition
Service Category	Classifies a lower level of technology and standard with respect to the business or technology function it serves. *Tagged Values* – ServiceCategoryID, Definition and Referenceing Service Area
Service Standard	Defines a standard and technology that supports a Service Category. *Tagged Values* – ServiceStandardID, Definition and Referencing Service Category
Standard Specification	Provides the specification details of the standard. *Tagged Value* – StandardSpecificationID

3.6 Tagged Values

The MDG Technology for TOGAF makes extensive use of Tagged Values for assigning custom properties to the various elements specific to TOGAF. It is recommended that you keep the Tagged Values window docked and visible at all times when creating or viewing a TOGAF model.

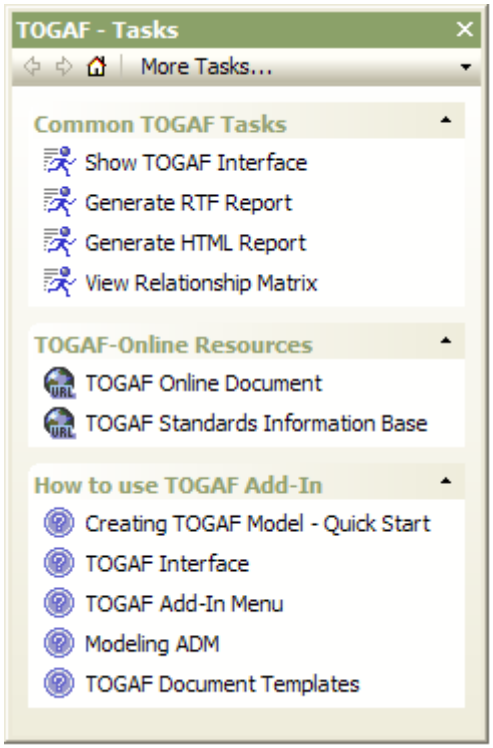
To open the Tagged Values window, or bring it to the top if already opened, select the **View | Tagged Values** menu option, or press **[Ctrl]+[Shift]+[6]**. For more information on the Tagged Values window, see the *Enterprise Architect User Guide*.



3.7 The TOGAF Tasks

The Enterprise Architect Tasks Pane provides a shortcut method of accessing the tasks defined for TOGAF, without searching through the menu options.

When the MDG Technology for TOGAF is enabled, the Enterprise Architect Tasks Pane loads the tasks defined for TOGAF. The Common TOGAF Tasks page displays for all phases of the framework.

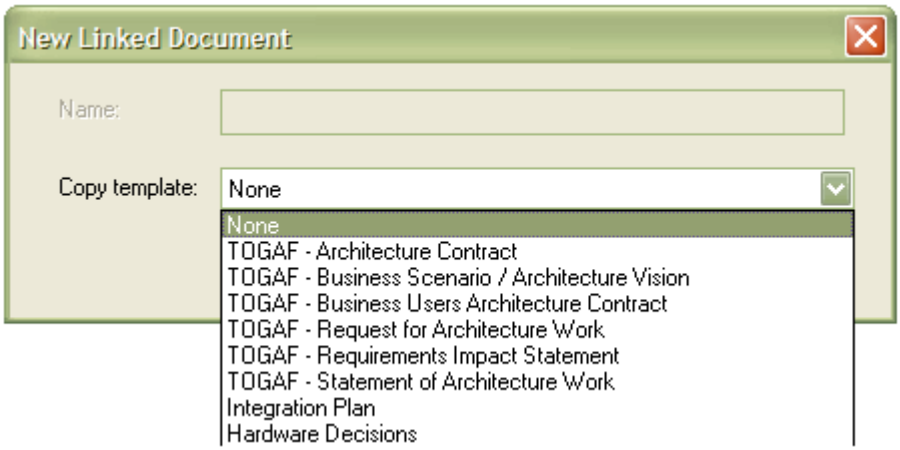


Task	Description
Common TOGAF Tasks	This group of commands is functional for all ADM phases of TOGAF.
Show TOGAF Interface	Opens the TOGAF Interface diagram. When there are several framework models in a project, a list of available framework diagrams displays. You select the required diagram from this list.
Generate RTF Report	Invokes the Enterprise Architect Generate RTF Report dialog.
Generate HTML Report	Invokes the Enterprise Architect Generate HTML Report dialog.
View Relationship Matrix	Opens the Enterprise Architect Relationship Matrix.
TOGAF-Online Resources	This group of options provides links to online resources.
How To Use TOGAF Add-In	This group of options provides links to Help pages.

3.8 TOGAF Linked Document Templates

The MDG Technology for TOGAF provides document templates that are specific to TOGAF for linked documents.

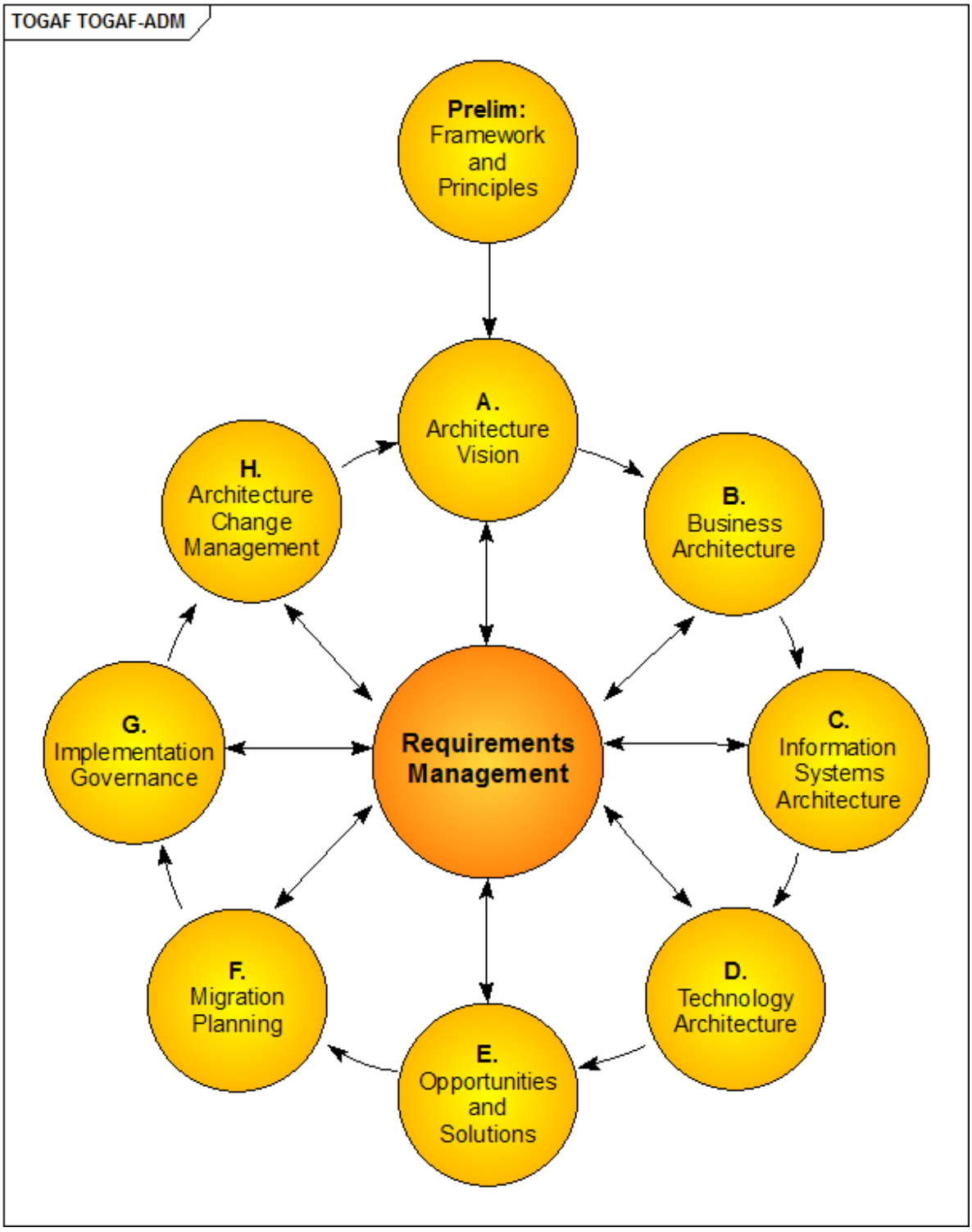
See the *Enterprise Architect User Guide* for more information on Linked Documents.



4 The TOGAF Architecture Development Method

The key to TOGAF remains a reliable, practical method - the *TOGAF Architecture Development Method (ADM)* - for defining business needs and developing an architecture that meets those needs, applying the elements of TOGAF and other architectural assets available to the organization.

TOGAF embodies the concept of the Enterprise Continuum 41 to reflect different levels of abstraction in an architecture development process. In this way TOGAF facilitates understanding and co-operation between actors at different levels. It provides a context for the use of multiple frameworks, models, and architecture assets in conjunction with the TOGAF ADM. By means of the Enterprise Continuum, architects are encouraged to leverage all other relevant architectural resources and assets, in addition to the TOGAF Foundation Architecture, in developing an organization-specific IT architecture.



Key Points

The following are the key points about the ADM:

- The ADM is iterative over the whole process, between phases and within phases. For each iteration of the ADM, a fresh decision must be taken on:
  - The breadth of coverage of the enterprise to be defined
  - The level of detail to be defined
  - The extent of the time horizon aimed at, including the number and extent of any intermediate time horizons
  - The architectural assets to be leveraged in the organization's Enterprise Continuum, including:

    - Assets created in previous iterations of the ADM cycle within the enterprise
    - Assets available elsewhere in the industry (such as other frameworks, systems models and vertical industry models).
- These decisions must be made on the basis of a practical assessment of resource and competence availability, and the value that can realistically be expected to accrue to the enterprise from the chosen scope of the architecture work.
- As a generic method, the ADM is intended to be used by enterprises in a wide range of different geographies and applied in different vertical sectors/industry types. As such it can be - but does not necessarily have to be - tailored to specific needs. For example, it can be used:
    - In conjunction with the set of deliverables of another framework, where these are more appropriate for a specific organization. (Many US federal agencies have developed individual frameworks that define the deliverables specific to their particular departmental needs.)
    - In conjunction with the well-known Zachman Framework, which is an excellent classification scheme, but which lacks an openly available, well-defined methodology.

4.1 ADM Documentation

This part of the help document identifies each ADM phase. The approach and complete descriptions are described in the TOGAF 8.1 documentation available on The Open Group website (http://www.opengroup.org/architecture/togaf8-doc/arch). The entries in this help topic link to specific sections of the TOGAF 8.1 documentation web site, to identify the objectives, inputs, steps and outputs of each phase.

Preliminary Phase: Framework and Principles

The Preliminary Phase is about defining 'how we do architecture' in the enterprise concerned. There are two main aspects:

- Defining the framework to be used
- Defining the architecture principles that inform any architecture work.

Phase A: Architecture Vision

Architecture Vision starts with receipt of a *Request for Architecture Work* from the sponsoring organization to the architecture organization. During this phase, you define the architecture scope, how to create the vision, and obtain approvals.

Phase B: Business Architecture

Business Architecture is the first architecture activity that must be undertaken, if not catered for already in other organizational processes (such as enterprise planning, strategic business planning or business process re-engineering).

Phase C: Information Systems Architectures

In this phase you develop the Information Systems Architectures, including the Data and Applications Architectures. Detailed steps for Phase C are given separately for each architecture domain:

- Data Architecture
- Applications Architecture

Phase D: Technology Architecture

In this phase you develop a Technology Architecture that forms the basis of the following implementation work.

- Technology Architecture (Detailed)
- Step 1 - Create Baseline
- Step 2 - Consider Views
- Step 3 - Create Architecture Model
- Step 4 - Select Services
- Step 5 - Confirm Business Objects
- Step 6 - Determine Criteria
- Step 7 - Define Architecture
- Step 8 - Conduct Gap Analysis

Phase E: Opportunities and Solutions

In the Opportunities and Solutions phase you identify the parameters of change, the major phases along the way, and the top-level projects to be undertaken in moving from the current environment to the target.

Phase F: Migration Planning

During the Migration Planning phase you sort the various implementation projects into priority order. Activities include assessing the dependencies, costs and benefits of the various migration projects.

Phase G: Implementation Governance

During the Implementation Governance phase you bring together all the information for successful management of the various implementation projects.

Phase H: Architecture Change Management

In the Architecture Change Management phase you establish an architecture change management process

for the new enterprise architecture baseline.

ADM Architecture Requirements Management

The ADM is continuously driven by the Architecture Requirements Management process.

5 The TOGAF Enterprise Continuum

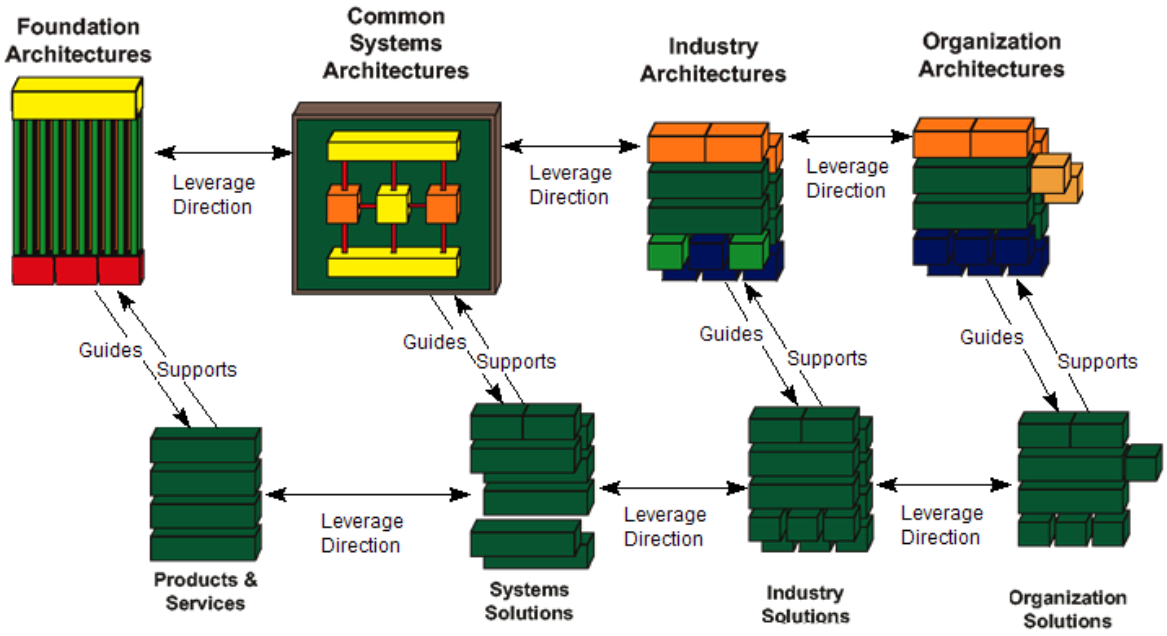
The simplest way to think of the Enterprise Continuum is as a 'virtual repository' of all the architecture assets - models, patterns, architecture descriptions and other artifacts - that exist both within the enterprise and in the IT industry at large, and that the enterprise considers itself to have available for the development of architectures for the enterprise.

Examples of 'assets within the enterprise' are the deliverables of previous architecture work that are available for re-use.

Examples of 'assets in the IT industry at large' are the wide variety of industry reference models and architecture patterns that exist and that are continually emerging, including those that are:

- highly generic, such as TOGAF's own Technical Reference Model (TRM)
- specific to certain aspects of IT, such as a web services architecture, or a generic manageability architecture
- specific to certain types of information processing, such as e-Commerce or supply chain management
- specific to certain vertical industries, such as the models generated by vertical consortia like TMF (in the Telecommunications sector), ARTS (Retail) or POSC (Petrotechnical).

Sparx Systems' Enterprise Architect support for Enterprise Continuum is provided by the Enterprise Continuum diagram and the corresponding Toolbox page. The starter model consists of an interface to the TOGAF Enterprise Continuum.



When you double-click on an Architecture Continuum and Solution Continuum, an *Enterprise Continuum* diagram displays. The Toolbox page provides the Architecture Building block, Solution Building block elements and the appropriate relationship connectors.

6 Support For Federal Enterprise Architecture Framework

MDG Technology for TOGAF provides diagrams and Toolbox pages specific to the Federal Enterprise Architecture Framework (FEAF). It also provides 'out-of-the-box' models of the FEAF Performance reference model and Technical Reference model.

To open FEAF-PRM and FEAF-TRM models 14, select the **Add-Ins | TOGAF | Open FEAF - Performance Reference Model** or **Open FEAF - Technical Reference Model** menu option respectively.

The following Enterprise Architect UML Toolbox pages provide specific support for FEAF:

- Business Reference Model Toolbox Page 30
- Performance Reference Model Toolbox Page 30
- Service Component Reference Model Toolbox Page 31
- Technology Reference Model Toolbox Page 32

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