



Enterprise Architect

User Guide Series

Zachman Framework

Author: Sparx Systems

Date: 2021-09-02

Version: 15.2

CREATED WITH  ENTERPRISE
ARCHITECT

Table of Contents

The Zachman Framework	5
Brief Introduction	7
Zachman Framework Copyright Notice	9
MDG Technology for Zachman Framework Software	
Product License Agreement	11
Acknowledgement of Trademarks	17
Support for the Zachman Framework	19
Zachman Framework System Requirements	20
Getting Started with Zachman	22
Using the Zachman Framework	24
The Zachman Framework Interface Diagram	26
Zachman Framework Model Structure	27
The Zachman Framework Model Template	29
Zachman Framework Diagrams	30
Zachman Framework Diagram Types	31
The Zachman Framework Toolbox	32
Business Data Page	37
Business Process Pages	39
Business Location Page	41
Business Motivation Pages	43
Organization Chart Pages	45
Business Events Pages	47
Data Map Pages	48



Business Logistics Pages.....	50
BPMN Pages.....	53
Event Schedule Pages.....	57
Strategy Map Pages.....	59
Data Distribution Architecture Pages.....	60
Business Rule Model Pages.....	62
Rule Design Pages.....	65
Network Architecture Pages.....	67
Rule Specification Pages.....	68
Tagged Values for Zachman Framework.....	70
Data Map Analysis.....	72
Cluster Report.....	74
Process Map.....	76
Business Scorecard Report Template.....	77
Model Validation.....	79
Validation Messages for Elements.....	81
Validation Messages for Connectors.....	84
Validation Messages for Diagrams.....	86
Licencing Copyright and Trademarks.....	87


The Zachman Framework

The Zachman Framework is a widely used approach for engineering Enterprise Architecture. The Framework is a simple, logical structure that helps in organizing the information infrastructure of the Enterprise and provides many benefits in helping align technology with business needs.

Discussion

The topics described here provide an introduction to, and procedural explanation of, using the MDG Technology for the Zachman Framework in Enterprise Architect.

Section	Content
Welcome 	This section provides an introduction to the Zachman Framework, and contains the formal documentation defining its use with Enterprise Architect.
Using the Zachman Framework 	Get started with the Zachman Framework, learning about the model structure, templates, diagram types and more.

<p>Model Validation</p> 	<p>Learn how to develop and configure model validation for the Zachman Framework.</p>
---	---

Brief Introduction

Welcome to the Zachman Framework in Enterprise Architect.

Using this technology with Enterprise Architect, you can employ the Zachman Framework with the associated benefits of a powerful, open-standard modeling system. The Zachman Framework is already integrated with the Ultimate and Unified Editions; it can be purchased separately to be used with the Enterprise Architect Professional or Corporate Editions.

About the Zachman Framework

The Zachman Framework is a widely used approach for engineering Enterprise Architecture. The Framework is a simple, logical structure that helps in organizing the information infrastructure of the Enterprise.

While conceptually simple, the Zachman Framework provides many benefits in helping align technology with business needs. It has become a popular approach in defining Enterprise Architecture because it:

- Is platform neutral
- Is a powerful planning device
- Is both comprehensive and readily understood by non-technical people
- Assists in problem solving

- Helps in documenting enterprise-wide information system architecture

Under the Zachman Framework, an Enterprise is modeled by answering six questions: What? How? Where? Who? When? and Why? with respect to six role perspectives: the Planner, Owner, Designer, Builder, Subcontractor and Functioning Enterprise.

For further information, visit the Zachman Framework website.

Getting Started

For instructions on how to use the Zachman Framework, see the topics:

- *Getting Started with the Zachman Framework* and
- *Using the Zachman Framework*

Zachman Framework Copyright Notice

Copyright © 2007-2021 Sparx Systems Pty. Ltd. All rights reserved.

The MDG Technology for Zachman Framework software contains proprietary information of Sparx Systems Pty Ltd. It is provided under a license agreement containing restrictions on use and disclosure and is also protected by copyright law. Reverse engineering of the software is prohibited. Please read the product license agreement for full details.

Due to continued product development, this information may change without notice. The information and intellectual property contained herein is confidential between Sparx Systems and the client and remains the exclusive property of Sparx Systems. If you find any problems in the documentation, please report them to us in writing. Sparx Systems does not warrant that this document is error-free. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior written permission of Sparx Systems. Licensed users are granted the right to print a single hardcopy of the user manual per licensed copy of the software, but may not sell, distribute or otherwise dispose of the hardcopy without written consent of Sparx Systems.

Sparx Systems Pty. Ltd.

99 Albert St,

Creswick, Victoria 3363,

AUSTRALIA

Phone: +61 (3) 5345 1140

Fax: +61 (3) 5345 1104

Support Email: support@sparxsystems.com

Sales Email: sales@sparxsystems.com

Website: sparxsystems.com

MDG Technology for Zachman Framework Software Product License Agreement

This Software Product License Agreement relates to the separately-purchased MDG Technology for Zachman Framework for use with the Professional and Corporate Editions of Sparx Systems Enterprise Architect. The MDG Technology integrated with the Unified and Ultimate Editions of Enterprise Architect is subject to the [Sparx Systems Enterprise Architect Modelling Tool](#).

MDG Technology for Zachman Framework - Enterprise Architect MDG **Add-In**, Version 1.1

Copyright © 2007-2021 Sparx Systems Pty Ltd. All Rights Reserved

IMPORTANT-READ CAREFULLY: This End User License Agreement ("EULA") is a legal agreement between YOU as Licensee and SPARX for the SOFTWARE PRODUCT identified above. By installing, copying, or otherwise using the SOFTWARE PRODUCT, YOU agree to be bound by the terms of this EULA. If YOU do not agree to the terms of this EULA, promptly delete the unused SOFTWARE PRODUCT.

The copyright in the SOFTWARE PRODUCT and its documentation is owned by Sparx Systems Pty Ltd, A.B.N 38 085 034 546. Subject to the terms of this EULA, YOU

are granted a non-exclusive right for the **duration** of the EULA to use the SOFTWARE PRODUCT. YOU do not acquire ownership of copyright or other intellectual property rights in any part of the SOFTWARE PRODUCT by virtue of this EULA.

Your use of this software indicates your acceptance of this EULA and warranty.

DEFINITIONS

In this End User License Agreement, unless the contrary intention appears,

- "EULA" means this End User License Agreement
- "SPARX" means Sparx Systems Pty Ltd A.C.N 085 034 546
- "Licensee" means YOU, or the organization (if any) on whose behalf YOU are taking the EULA
- "Registered Edition of MDG Technology for Zachman Framework" means the edition of the SOFTWARE PRODUCT which is available for purchase from the web site:
<https://sparxsystems.com/products/mdg/tech/zachman/purchase.html>
- "SOFTWARE PRODUCT" or "SOFTWARE" means MDG Technology for Zachman Framework, which includes computer software and associated media and printed materials, and may include online or electronic documentation

- "Support Services" means email-based support provided by SPARX, including advice on usage of Enterprise Architect, investigation of bugs, fixes, repairs of models, if and when appropriate, and general product support
- "SPARX support engineers" means employees of SPARX who provide on-line support services

GRANT OF LICENSE

In accordance with the terms of this EULA YOU are granted the following rights:

- To install and use ONE copy of the SOFTWARE PRODUCT or, in its place, any prior version for the same operating system, on a single computer; as the primary user of the computer on which the SOFTWARE PRODUCT is installed, YOU may make a second copy for your exclusive use on either a home or portable computer
- To store or install a copy of the SOFTWARE PRODUCT on a storage device, such as a network server, used only to install or run the SOFTWARE PRODUCT over an internal network
- To make copies of the SOFTWARE PRODUCT for backup, archival and instructional purposes

EVALUATION LICENSE

The Trial Edition of MDG Technology for Zachman Framework is not free software. Subject to the terms of this agreement, YOU are hereby licensed to use this software for evaluation purposes without charge for a period of thirty (30) days.

Upon expiration of the thirty (30) days, the SOFTWARE PRODUCT must be removed from the computer.

Unregistered use of MDG Technology for Zachman Framework after the 30-day evaluation period is in violation of Australian, U.S. and international copyright laws.

SPARX may extend the evaluation period on request and at their discretion.

If YOU choose to use this software after the 30 day evaluation period a license must be purchased (as described at

<https://sparxsystems.com/products/mdg/tech/zachman/purchase.html>). Upon payment of the license fee, YOU will be sent details on where to download the registered edition of MDG Technology for Zachman Framework and will be provided with a suitable software 'key' by email.

ADDITIONAL RIGHTS AND LIMITATIONS

YOU hereby undertake not to sell or sub-licence the SOFTWARE PRODUCT other than as expressly authorized by this EULA.

NO WARRANTY. The SOFTWARE PRODUCT is provided "AS IS", without warranty of any kind, and SPARX expressly disclaims all warranties and/or conditions with respect to the SOFTWARE PRODUCT, either express, implied or statutory, including, but not limited to, the implied warranties and/or conditions of merchantability, of satisfactory quality, of fitness for a particular purpose, of accuracy, of quiet enjoyment, and of non-infringement of third party rights.

LIMITATION

Under no circumstances shall SPARX be liable for any incidental, special, indirect or consequential damages arising out of or relating to this license or YOUR use, reproduction, modification, distribution of the SOFTWARE PRODUCT, or any portion thereof, whether under a theory of contract, warranty, strict liability or otherwise, even if the copyright holder has been advised of the possibility of such damages and notwithstanding the failure of essential purpose of any remedy.

TRADEMARKS

All names of products and companies used in this EULA, the SOFTWARE PRODUCT, or the enclosed documentation can be trademarks of their corresponding owners. Their use in this EULA is intended to be in compliance with the respective guidelines and licenses. Windows, Windows XP, Windows 2003 Server, Windows

2008 Server, Windows 7, Windows 8 and Windows 10 are trademarks of Microsoft.

The Zachman Framework for Enterprise Architecture™ is a trademark of John A. Zachman and Zachman International.

GOVERNING LAW

This agreement shall be construed in accordance with the laws of the Commonwealth of AUSTRALIA, in the state of Victoria.

Acknowledgement of Trademarks

Sparx Systems acknowledge these trademarks, which are used throughout the MDG for Zachman Framework documentation.

Trademarks of Microsoft

- Microsoft Word
- Microsoft Office
- Windows®

Trademarks of the Object Management Group

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

Trademark of John A. Zachman and Zachman International

- The Zachman Framework For Enterprise Architecture TM

Support for the Zachman Framework

Technical support for the Zachman Framework is available to registered users of Enterprise Architect through the same channels as for Enterprise Architect itself.

Zachman Framework System Requirements

Zachman Framework version 1.1.4 runs under the environments identified here.

Microsoft® Operating Systems Supported

- Windows 10
- Windows 8
- Windows 7
- Windows 2008 Server
- Windows 2003 Server
- Windows XP Service Pack 2

Enterprise Architect Versions Supported

- Enterprise Architect Version 7.1 or later

Notes

- 32 bit and 64 bit operating systems supported

Getting Started with Zachman

When you install the Unified or Ultimate Edition of Enterprise Architect, the Zachman Framework is fully enabled and ready to use.

If you have the Corporate or Professional Edition of Enterprise Architect, you can purchase and install the MDG Technology for Zachman Framework separately; once you have entered the registration key for the MDG Technology for Zachman Framework, it is automatically available in and integrated with Enterprise Architect, as for the Unified and Ultimate Editions.

Access the MDG Technology For Zachman Framework

1. Create a new Enterprise Architect project file, and click on the top-level Package.
2. Select the 'Design > Model > **Perspectives > Model Wizard**' option.
3. In the Model Wizard, select the 'Enterprise Architecture > Zachman' Perspective and the 'Zachman Framework' Pattern.
4. Click on the **Create Patterns button**.

A new base Zachman model is created in the **Browser window**, containing the Zachman Framework diagram and the Planner, Owner, Designer, Builder, Subcontractor and

Functioning Enterprise Packages.

Using the Zachman Framework

The Zachman Framework provides a model-based framework for planning, designing and implementing the Architecture for an Enterprise. The starter model provided with the Technology 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 cell of the Zachman classification framework.

The Technology also provides model validation and reporting capabilities for strategic project plans.

Within Enterprise Architect you can choose between **Diagram View** and **Element List View**. **Element List View** can be used in cells where you prefer to define only the model artifacts.

You can also align cells across the framework (horizontally and vertically) through the Enterprise Architect **Relationship Matrix**.

You can view a demonstration video of the MDG Technology For Zachman Framework in use, on the Sparx Systems website.

The Zachman Framework Help topics provide a detailed exploration of the Zachman Framework tools and features, such as.

- The example Enterprise Architect model for the Zachman Framework








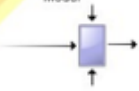

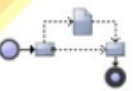



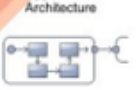

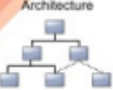




















- UML profiles (Toolbox pages) for use within specific Zachman Framework cells
- A diagram interface for the Zachman Framework
- New diagram types specific to the Zachman Framework
- A flexible model starter-structure
- Report generation capabilities for strategic project plans

The MDG Technology For Zachman Framework is integrated with the features of Enterprise Architect.

The Zachman Framework Interface Diagram

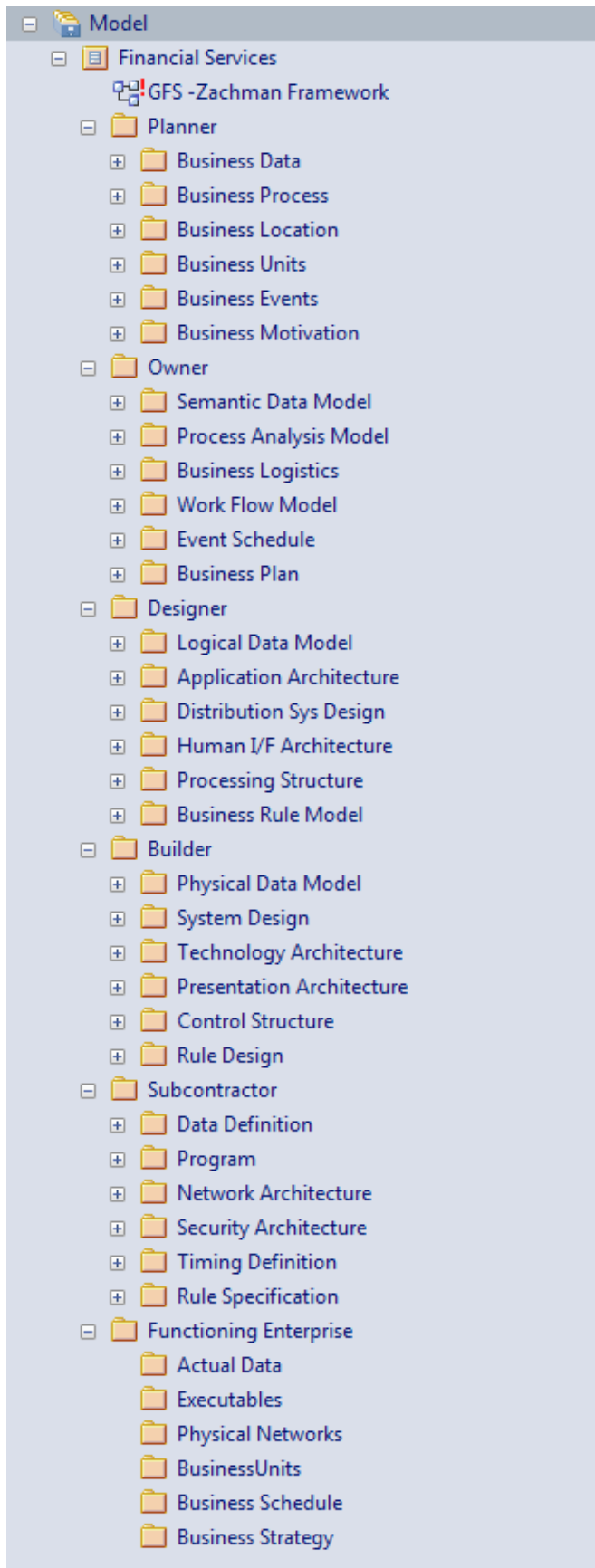
The Zachman Framework is a predefined model in Enterprise Architect. The model-level diagram of the model structure is the Zachman Framework Interface diagram, which serves as a template for the development of Enterprise Architecture based on the Zachman classification framework.

Each cell links to the relevant Zachman Framework diagram in the child Packages in the base model.

The Zachman Framework	DATA What	FUNCTION How	NETWORK Where	PEOPLE Who	TIME When	MOTIVATION Why
SCOPE (Contextual) Planner	Things Important to the Business 	Processes the Business Performs 	Locations in which the Business Operates 	Organizations Important to the Business 	Events/Cycles Significant to the Business 	Business Goals/Strategies 
BUSINESS MODEL (Conceptual) Owner	Conceptual Data Model 	Business Process Model 	Business Logistics 	Work Flow Model 	Master Schedule 	Business Plan 
SYSTEM MODEL (Logical) Designer	Logical Data Model 	Application Architecture 	Distributed System Architecture 	Human Interface Architecture 	Processing Structure 	Business Rule Model 
TECHNOLOGY MODEL (Physical) Builder	Physical Data Model 	System Design 	Technology Architecture 	Presentation Architecture 	Control Structure 	Rule Design 
DETAILED REPRESENTATIONS Sub-Contractor	Data Definition 	Program 	Network Architecture 	Security Architecture 	Timing Definition 	Rule Specification 
FUNCTIONING ENTERPRISE	Data 	Function 	Network 	Organization Units 	Schedule 	Strategy 

Zachman Framework Model Structure

The Zachman Framework provides a Framework model template, in which each Zachman Perspective (or row) is modeled as the highest-level Package inside the model. Cells belonging to the **Perspectives** are modeled as child Packages of the appropriate row Package.



The Zachman Framework Model Template

The Zachman Framework Model Template provides the model skeleton from which you can develop your Enterprise definition.

Add a new Zachman Framework model to the project

1. Right-click on the root node and select 'Add a Model using Wizard'. The '**Model Wizard**' view displays.
2. On the 'Model Patterns' tab, click on the <name> Perspective button and select 'Enterprise Architecture > Zachman' from the list.
3. Select the 'Zachman Framework' pattern.
4. Click on the **Create Patterns button**.

Zachman Framework Diagrams

The Zachman Framework introduces new diagram types that support modeling of the Zachman Classification Framework. A Zachman Framework diagram is created in the same way as any other diagram in Enterprise Architect. The Technology provides access to these categories of diagram through the 'New Diagram' dialog:

- Planner
- Owner
- Designer
- Builder
- Subcontractor
- Zachman Framework Interface

Zachman Framework Diagram Types


The Zachman Framework further extends the Enterprise Architect diagram set to support the Framework, with diagram types appropriate to each cell of the Zachman Framework.

ZFI Zachman Framework						
<i>The Zachman Framework</i>	What Data	How Function	Where Location	Who People	When Time	Why Future
Planner Objective/Scope	Business Data	High Level Business Process	Business Locations	Organization Chart	Business Events	Business Motivation
Owner Conceptual	Data Map Add-In Generated Process Map	Process Analysis	Business Logistics	BPMN	Event Schedule	Strategy Map Mind Mapping
Designer Logical	Class - (Platform Independent Model)	Activity	Data Distribution Architecture	Use Case	State Transition	Business Rule Model Requirements
Builder Physical	Physical Data Model	Class - (Platform Specific Model) Component	Deployment	User Interface	Interaction Communication	Rule Design
Sub- Constructor Out-of-Context	Data Definition Enterprise Architect DDL Generation	Enterprise Architect Code Generation	Network Architecture	Security Architecture	Timing	Rule Specification
FUNCTIONING ENTERPRISE						

Legend

- UML Diagrams
- UML Profile for Zachman Framework
- Enterprise Architect extension

The Zachman Framework Toolbox

The Zachman Framework pages of the **Diagram Toolbox** provide elements and relationships for all the Zachman Framework diagrams that the MDG Technology supports. The Zachman Framework Toolbox pages can be accessed by clicking on  and specifying 'Zachman' in the 'Find Toolbox Item' dialog. The Diagram Toolbox can be docked on either side of the diagram, or free floated on top of the diagram to expose more surface for editing.

Diagrams for Toolboxes

This table shows, for each Zachman Framework cell, the diagram that could be used.

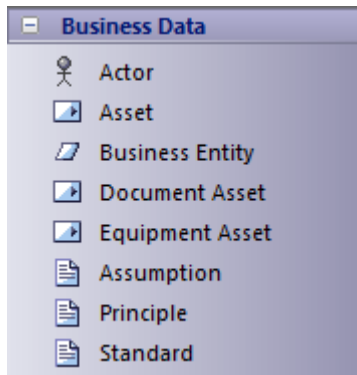
Zachman Cell	Diagram
Planner - Data	Business Data
Planner - Function	Business Process
Planner - Location	Business Locations

Planner - People	Organization Chart
Planner - Timing	Business Events
Planner - Motivation	Business Motivation
Owner - Data	Data Map and Process Map (Generated by Add-In)
Owner - Function	Process Analysis
Owner - Location	Business Logistics
Owner - People	BPMN
Owner - Timing	Event Schedule
Owner - Motivation	Enterprise Architect Mind Mapping diagram and Strategy Map

Designer - Data	Class
Designer – Function	Activity
Designer - Location	Data Distribution Architecture
Designer - People	Use Case
Designer - Timing	State Transition
Designer - Motivation	Business Rule Model
Builder - Data	Physical Data Model
Builder - Function	Class and Component
Builder - Location	Deployment
Builder -	User Interface

People	
Builder - Timing	Communication and Interaction
Builder - Motivation	Rule Design
Subcontracto r - Data	Data Definition; default toolbox for the diagram is Custom.
Subcontracto r – Function	No diagram defined – Code generation is done in this cell.
Subcontracto r - Location	Network Architecture
Subcontracto r - People	Security Architecture
Subcontracto r - Timing	Timing
Subcontracto r - Motivation	Rule Specification

Business Data Page



Business Data Toolbox

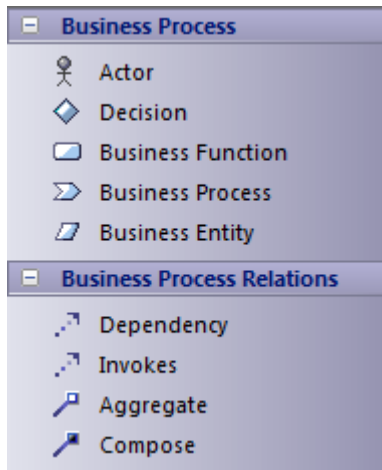
Item	Description
Actor	Models a stakeholder or any other human resource of the enterprise.
Asset	Represents the enterprise resources that could be estimated for value.
Business Entity	Represents generic enterprise resources.
Document Asset	A subtype of Asset that captures the important documents of the enterprise.
Equipment Asset	A subtype of Asset that captures the equipment resources of the enterprise.

Assumption	<p>Captures the assumptions made in information manipulation.</p> <p>Applies the Tagged Value Type = Enterprise / Business / System / Application / Technology / Data.</p>
Principle	<p>Defines the Principles framed and followed in the enterprise.</p> <p>Applies the Tagged Value Type = Enterprise / Business / System / Application / Technology / Data.</p>
Standard	<p>Defines the standards followed in the Enterprise.</p> <p>Applies the Tagged Value Type = Enterprise / Business / System / Application / Technology / Data.</p>

Notes

- Elements and connectors common to Enterprise Architect UML and Extended diagrams are documented in the [Object Toolbox](#) section

Business Process Pages



Business Process Toolbox

Item	Description
Actor	Models a stakeholder or any other human resource of the Enterprise.
Decision	Indicates the point of conditional progression where a business decision is taken.
Business Function	Represents a major function performed by the enterprise or a part of the enterprise.
Business	Represents a function or behavior of the

Process	enterprise or part of the enterprise.
Business Entity	Represents generic enterprise resources.
Invokes	A relationship that defines the invocation of a business process.

Notes

- Elements and connectors common to Enterprise Architect UML and Extended diagrams are documented in the [Object Toolbox](#) section

Business Location Page



Business Location Toolbox

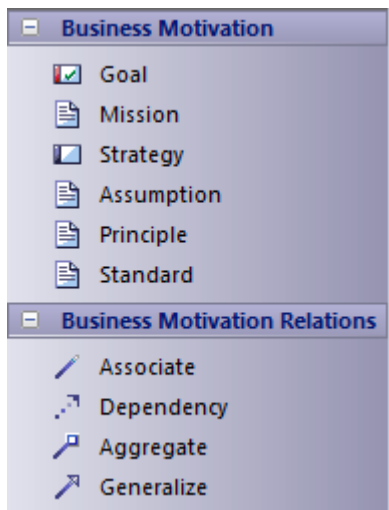
Item	Description
Branch Office	Models a Business Location as a Branch Office.
Client Place	Models a Business Location as a Client Place.
Head Quarters	Models a Business Location as a Head Quarters.
Business Location	Models the location from which the business operates.
Office Block	Models a Business Location as an Office

	Block.
Sales Agent	Models a Business Location as a Sales Agent.
Supplier	Models a Business Location as a Supplier.

Notes

- Elements and connectors common to Enterprise Architect UML and Extended diagrams are documented in the [Object Toolbox](#) section

Business Motivation Pages



Business Motivation Toolbox

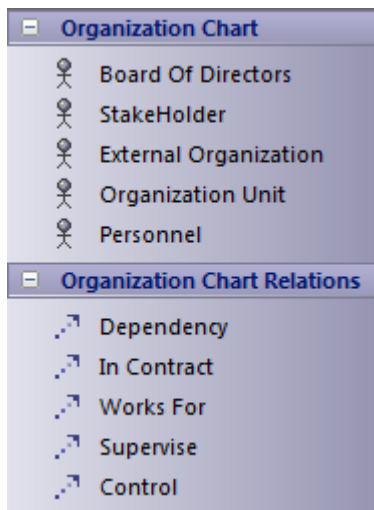
Item	Description
Goal	Models what is to be achieved by the enterprise, with specifications defined by the Tagged Values.
Mission	Models the mission statement, policies and values of the enterprise.
Strategy	Models the strategy statements for the business plan.
Assumption	Models the assumptions made in information manipulation.

	Tagged Value Type = Enterprise / Business / System / Application / Technology / Data.
Principle	Defines the Principles framed and followed in the enterprise. Tagged Value Type = Enterprise / Business / System / Application / Technology / Data.
Standard	Defines the standards followed in the enterprise. Tagged Value Type = Enterprise / Business / System / Application / Technology / Data.

Notes

- Elements and connectors common to Enterprise Architect UML and Extended diagrams are documented in the [Object Toolbox](#) section

Organization Chart Pages



Organization Chart Toolbox

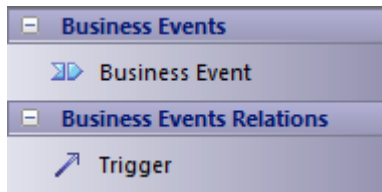
Item	Description
Board of Directors	Captures the details of the board of directors.
StakeHolder	Defines a stakeholder of the enterprise.
External Organization	Defines any external business unit that is not under direct control of the enterprise, but has a relationship with the enterprise.
Organization Unit	Defines any business unit that is under direct control of the enterprise.

Personnel	Captures the details of personnel in an enterprise.
In Contract	A connector that represents the contract-based relationships between business units.
Works For	A connector that captures the details of team links; for example, Stakeholder 1 works for Organization Unit 1.
Supervise	A connector that captures process supervision details.
Control	A connector that captures Unit in charge or Person in charge information.

Notes

- Elements and connectors common to Enterprise Architect UML and Extended diagrams are documented in the [Object Toolbox](#) section

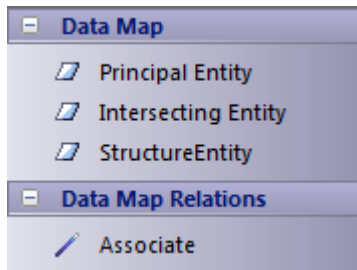
Business Events Pages



Business Event Toolbox

Item	Description
Business Event	Captures major business events of the enterprise.
Trigger	Indicates that a Business Event triggers another event or a business process.

Data Map Pages



Data Map Toolbox

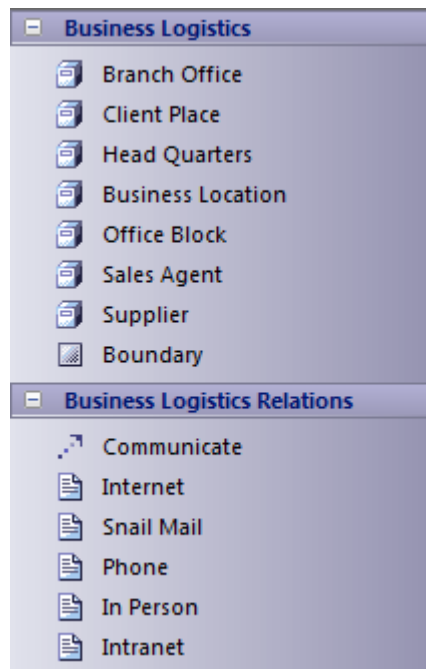
Item	Description
Principal Entity	Represents a business entity that forms a resource of the enterprise.
Intersecting Entity	Normalizes the many-to-many relationship between principal entities.
Structure Entity	Captures potential knowledge-based entities.

Notes

- Elements and connectors common to Enterprise Architect UML and Extended diagrams are documented in the

Object Toolbox section

Business Logistics Pages



Business Logistics Items and Relations

Item	Description
Branch Office	Models a Business Location as a Branch Office.
Client Place	Models a Business Location as a Client location
Head Quarters	Models a Business Location as Head Quarters.

Business Location	Models the location from which the business operates.
Office Block	Models a Business Location as an Office Block.
Sales Agent	Models a Business Location as a Sales Agent.
Supplier	Models a Business Location as a Supplier.
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.
----------	---

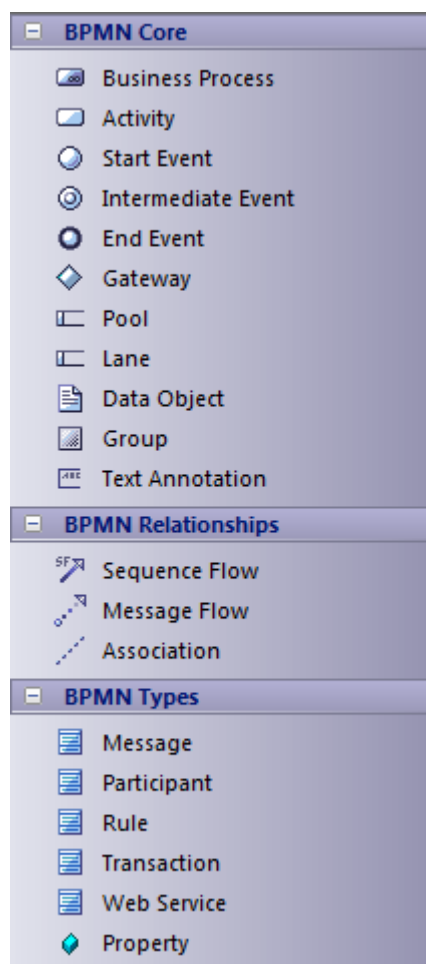
Notes

- Elements and connectors common to Enterprise Architect UML and Extended diagrams are documented in the [Object Toolbox](#) section

BPMN Pages

The BPMN Toolbox pages provide the graphical (Core) and non-graphical (Types) Business Process Model and Notation (BPMN) elements for use on Business Process diagrams through the Zachman Framework Technology.

Specifications of these elements and relationships are defined by Tagged Values.



BPMN Toolbox

Item	Description
------	-------------

Business Process	Defines a business process; an extension of a composite Activity.
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	Logically organizes an Activity; an extension of a Partition element.
Lane	Subdivides a Pool; an extension of a Partition element.
Data Object	Defines a physical piece of information used or produced by a system; an extension of an Artifact element.

Group	Groups a number of other elements; an extension of a Boundary element.
Text Annotation	A comment.
Sequence Flow	Defines the flow of an activity; an extension of a Control Flow relationship.
Message Flow	Defines the flow of communications in a process; an extension of a Control Flow relationship.
Association	Associates information and artifacts with flow objects.
Message	Defines a message; an extension of a Class element.
Participant	Defines a participant in an activity; an extension of a Class element.
Rule	Defines business rule statements; an extension of a Class element.
Transaction	Defines a transaction in an activity; an extension of a Class element.

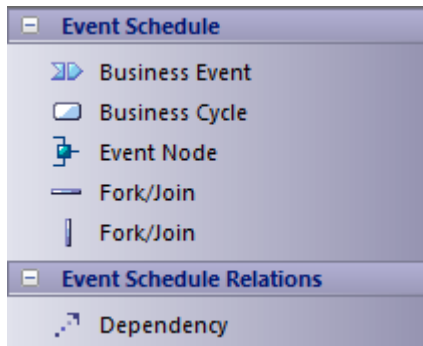
Web Service	Defines a web service; an extension of a Class element.
Property	Assigns a property to an element; an extension of an attribute.

Notes

- Enterprise Architect is delivered with the BPMN Technologies (for BPMN 1.0, 1.1 and 2.0) automatically installed, providing BPMN profiles and Toolboxes separate from this Zachman version; to make even further use of BPMN facilities, download the BPMN **Add-In** from:

https://sparxsystems.com/products/mdg_bpmn.html

Event Schedule Pages



Event Schedule Toolbox

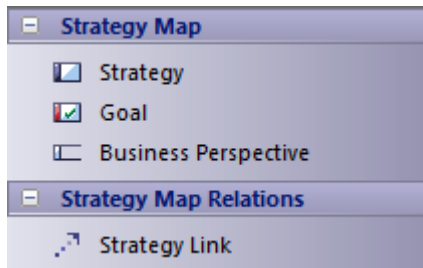
Item	Description
Business Event	Captures major business events of the enterprise.
Business Cycle	Captures major business cycles of the enterprise.
Event Node	Captures the event points in a business cycle.

Notes

- Elements and connectors common to Enterprise Architect

UML and Extended diagrams are documented in the [Object Toolbox](#) section

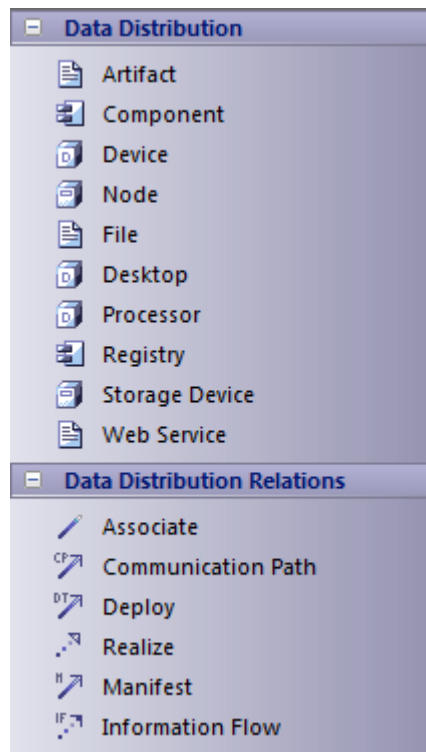
Strategy Map Pages



Strategy Map Toolbox

Item	Description
Strategy	Captures the strategy statements for the business plan.
Goal	Captures what is to be achieved by the enterprise, with specifications defined by the Tagged Values.
Business Perspective	Relates the strategies to a specific category.
Strategy Link	Indicates that a strategy is linked to another strategy or goal.

Data Distribution Architecture Pages



Data Distribution Architecture Toolbox

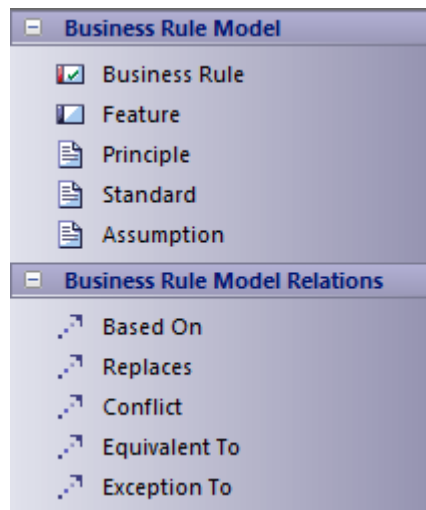
Item	Description
File	Represents a file.
Desktop	Represents a desktop.
Processor	Represents a processor.
Registry	Represents a registry.

Storage Device	Represents a storage device.
Web Service	Represents a web service.

Notes

- Elements and connectors common to Enterprise Architect UML and Extended diagrams are documented in the [Object Toolbox](#) section

Business Rule Model Pages



Business Rule Model Toolbox

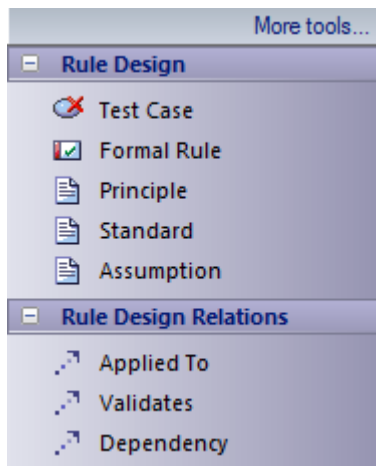
Item	Description
Business Rule	Captures the Business Rule statements.
Principle	<p>Defines the Principles framed and followed in the Enterprise.</p> <p>Tag Value Type = Enterprise / Business / System / Application / Technology / Data.</p>
Standard	<p>Defines the standards followed in the Enterprise.</p> <p>Tag Value Type = Enterprise / Business /</p>

	System / Application / Technology / Data.
Assumption	Captures the assumptions made in information manipulation. Tag Value Type = Enterprise / Business / System / Application / Technology / Data.
Based On	Indicates that a rule is based on another model element, which forms the rationale for the rule.
Replaces	Indicates that a new rule replaces another rule.
Conflict	Indicates that a rule conflicts with another defined rule.
Equivalent To	Indicates that a rule is equivalent to another rule.
Exception To	Indicates exceptions for a rule.

Notes

- Elements and connectors common to Enterprise Architect UML and Extended diagrams are documented in the [Object Toolbox](#) section

Rule Design Pages



Rule Design Toolbox

Item	Description
Formal Rule	Represents a business rule transformed to a technology-specific logical rule or constraint statement.
Principle	Defines the Principles framed and followed in the Enterprise. Tag Value Type = Enterprise / Business / System / Application / Technology / Data.
Standard	Used to define the Standards followed in the Enterprise.

	Tag Value Type = Enterprise / Business / System / Application / Technology / Data.
Assumption	Used to capture the assumptions made in information manipulation. Tag Value Type = Enterprise / Business / System / Application / Technology / Data.
Applied To	Indicates that a Formal Rule is applied to other model artifacts such as Scenarios or Activities.
Validates	Indicates that a model artifact validates a Formal Rule.

Notes

- Elements and connectors common to Enterprise Architect UML and Extended diagrams are documented in the [Object Toolbox](#) section

Network Architecture Pages



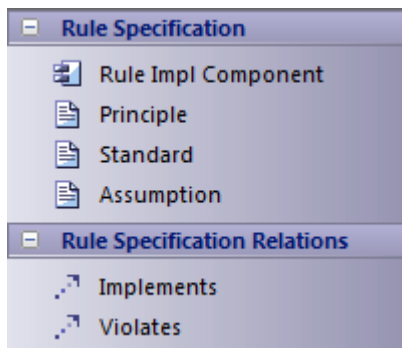
Network Architecture Toolbox

Item	Description
Artifact	Generic graphical element used to capture information.
Document Artifact	Generic graphical element used to capture detailed information such as network configuration details.

Notes

- For a full description of Artifact elements, see the Artifact topic

Rule Specification Pages



Rule Specification Toolbox

Item	Description
Rule Impl Component	Captures the component implementing a rule.
Principle	<p>Defines the Principles framed and followed in the enterprise.</p> <p>Tag Value Type = Enterprise / Business / System / Application / Technology / Data.</p>
Standard	<p>Defines the Standards followed in the enterprise.</p> <p>Tag Value Type = Enterprise / Business / System / Application / Technology / Data.</p>

Assumption	<p>Captures the assumptions made in information manipulation.</p> <p>Tag Value Type = Enterprise / Business / System / Application / Technology / Data.</p>
Implements	<p>Indicates that a Rule Impl Component implements a rule.</p>
Violates	<p>Indicates that the rule is violated by the connecting model element.</p>

Tagged Values for Zachman Framework

The Zachman Framework makes extensive use of Tagged Values to assign custom properties to the various Zachman Framework elements. When creating or viewing a Zachman Framework model, it is recommended that you keep the **Properties window** docked and visible at all times, with the 'ZF' section expanded.

Access

Ribbon	Start > Desktop > Design > Properties > Tags Explore > Portals > Windows > Properties > Tagged Values
Keyboard Shortcuts	Ctrl+2

Synchronize Tagged Values

From time to time you might need to add missing Tagged

Values to all elements in the model that require them, such as:

- Whenever you create a new element by any means other than directly dropping the element from the Zachman Framework Toolbox pages
- Before using a new version of the Technology, to update the Tagged Values of elements in existing models to the latest version of the Zachman Framework profile

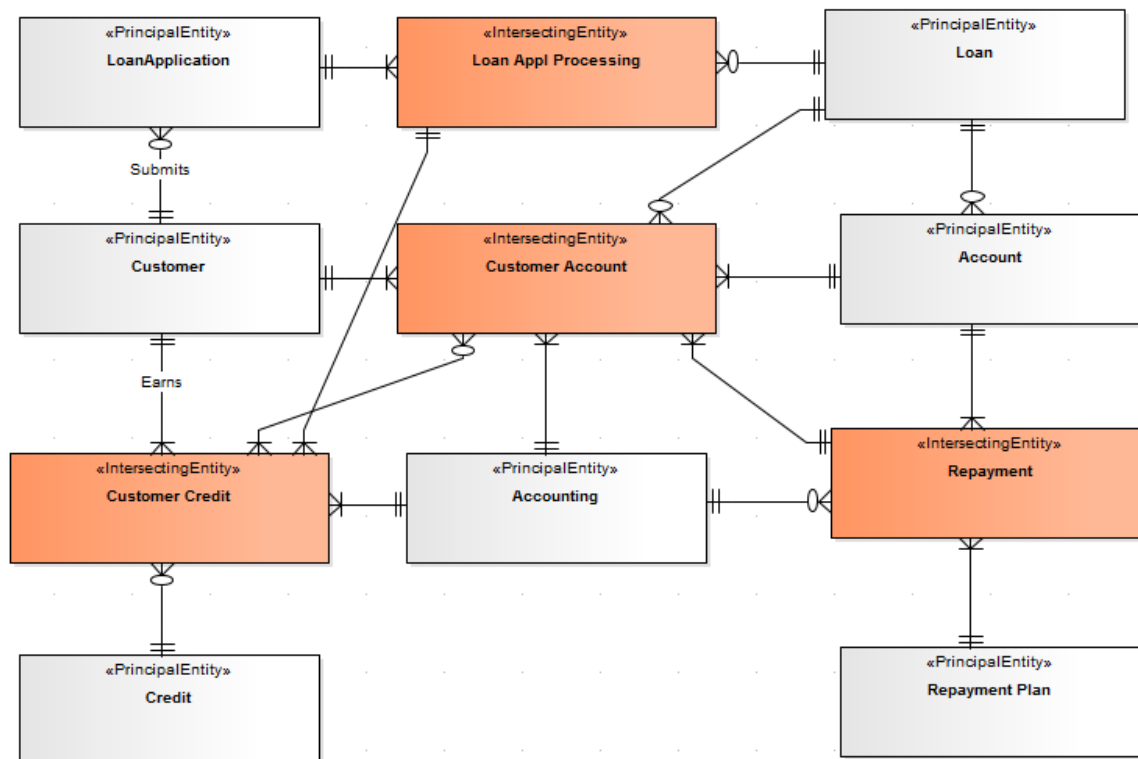
You can do this using the 'Synchronize Stereotype' option on the icons in the Zachman Framework pages of the **Diagram Toolbox**.

Data Map Analysis

A valid Data Map diagram is basically an **Entity Relationship diagram** constructed using Principal Entity, Structure Entity and Intersecting Entity elements. The relationships between them are defined by the business rules.

- Principal Entities are identified from the Business Entities in scope
- Intersecting Entities are used to break a many-to-many association between Principal Entities, which form potential business processes
- Structure Entities represent the existence of a potential knowledge base

This is an example of a valid Data Map diagram:



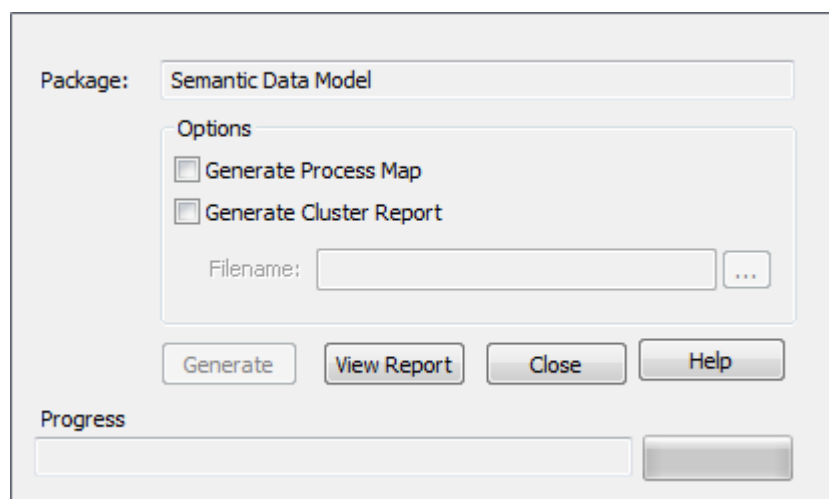
Cluster Reports and Process Maps are deliverables of a valid Data Map diagram analysis.

Perform a Data Map diagram analysis

With the Data Map diagram to be analyzed open and active, either:

- Select the 'Specialize > **Add-Ins** > Zachman Framework > Do Data-Map Analysis' ribbon option, or
- Right-click on the Data Map diagram in the **Browser window**, and select the 'Specialize | Zachman Framework | Do Data-Map Analysis' context menu option

The 'Data Map Analysis' dialog displays.



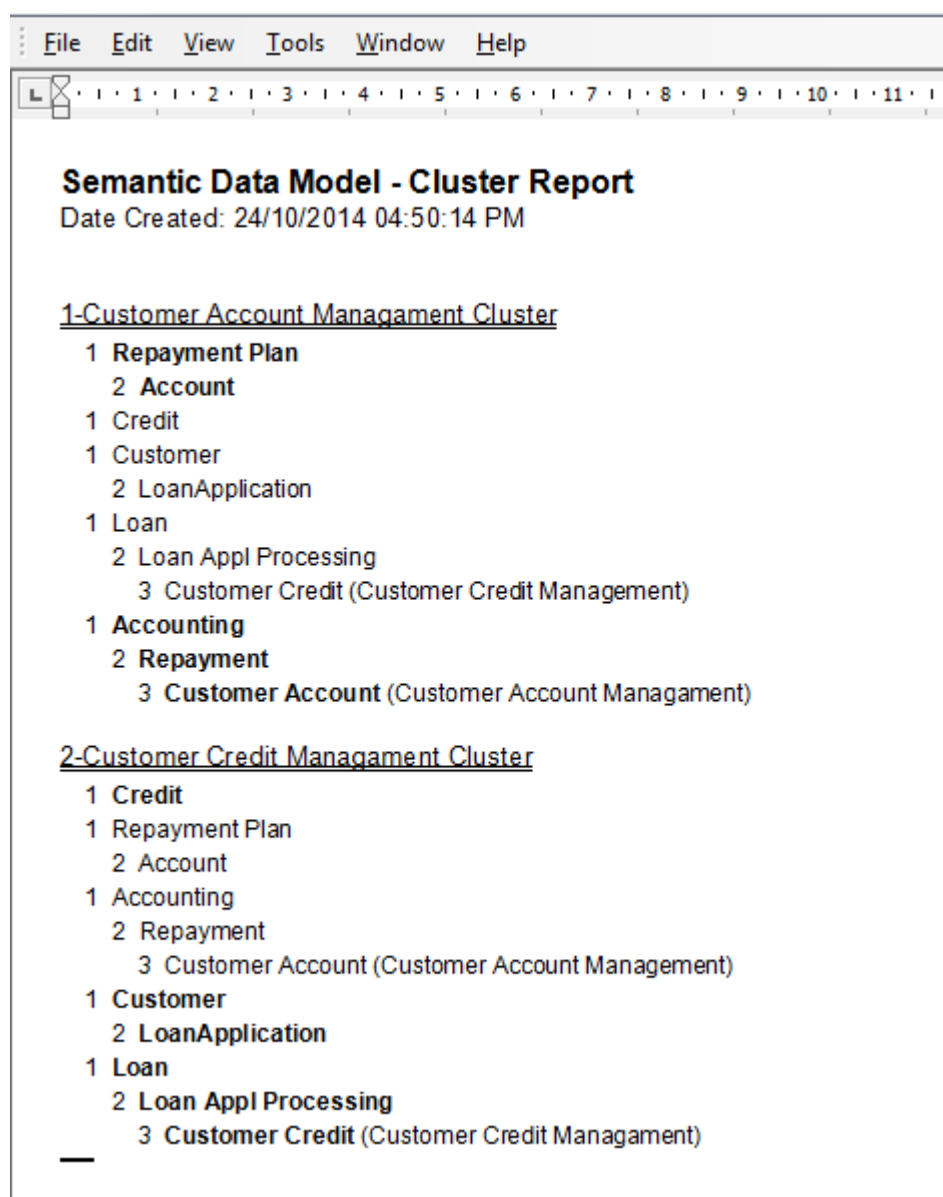
Click on the checkbox against each deliverable required. If you have selected 'Generate Cluster Report', also enter the file pathname under which to save the report.

Click on the **Generate button**.

Cluster Report

A cluster is a logically related group of processes arranged in a sequence, this being the plan of the order of the execution of processes.

This Cluster Report was generated for the sample Data Map diagram, in .rtf format.



The report shows how each cluster is a logical group of processes or tasks forming a major business process.

The number preceding each entity name is the phase number for the entity. Phase 1 against an entity means that the entity forms a potential resource/element that must be procured/framed before proceeding with the business process.

Entities with phase numbers greater than 1 are potential processes, with their sequence of execution set after procuring/framing the phase 1 entities in the cluster.

After successful completion of Data Map analysis, the phase property of each entity in the Data Map diagram is set accordingly.

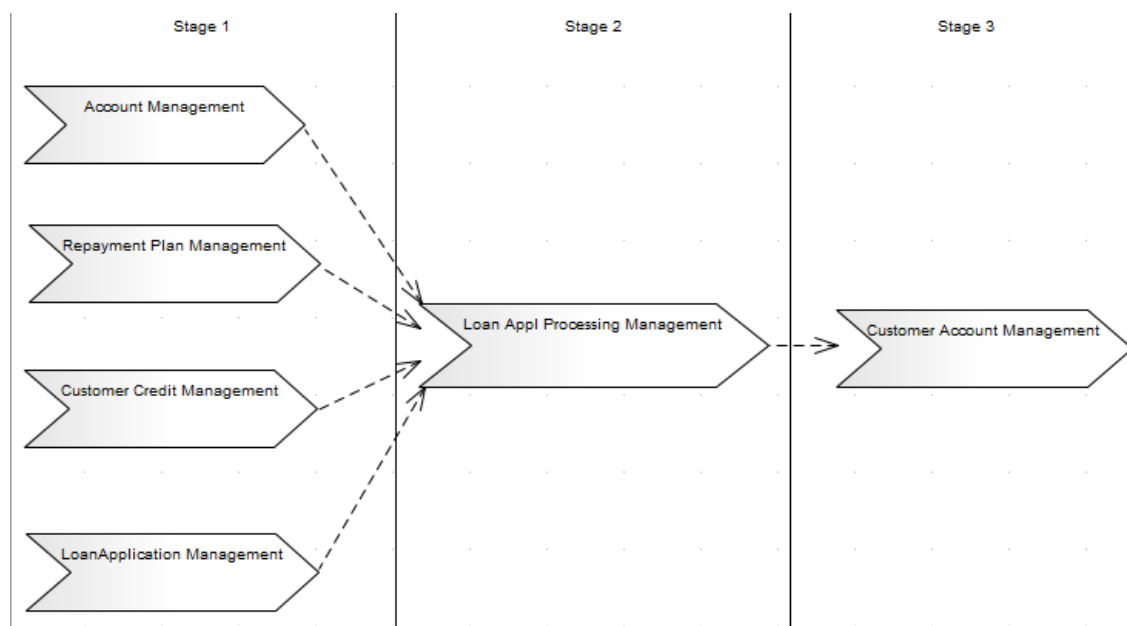
Acknowledgement

The algorithm for Cluster Report generation is derived from the book *Enterprise Architecture for Integration: Rapid Delivery Methods and Technologies* (Clive Finkelstein; April 2006).

Process Map

A Process Map is the visual model of the Cluster Report; however, the Phase 1 entities in the Cluster Report are not shown. The Process Map groups the identified Business Processes into the stages of the project, arranged as a guide for the project.

This is the Process Map generated for the sample Data Map diagram.



Business Scorecard Report Template

To aid your strategic management methods, the Zachman Framework provides a report template for creating Business Scorecards.

Generate a Business Scorecard

Step	Action
1	In the Browser window , click on the Package containing your Business Perspectives and Strategies (an Owner Business Plan Strategic Plan Package). The Business Perspectives must own the respective strategies.
2	Either: <ul style="list-style-type: none">• Press F8, or• Select the 'Publish > Model Reports > Report Builder > Generate Documentation' menu option The 'Generate Documentation' dialog displays.
3	In the 'Use Template' field, click on the drop-down arrow and select 'Balanced Score Card'.

4	Click on the Generate button .
---	---------------------------------------

Model Validation

The Zachman Framework registers with Enterprise Architect to receive model validation requests from users.

Configure Model Validation

To configure Enterprise Architect to perform Zachman Framework model validation, select:

- 'Design > Model > Manage > **Validate** > Configure Validation Rules'

The '**Model Validation** Configuration' dialog displays.



To perform validation on Zachman Framework models only, click on the **Select None** button and then click on the checkbox for 'Zachman Framework (ZF) Rules'. Click on the **OK button**.

Validate Zachman Framework Model

You can validate, against the Zachman Framework rules:

- An element and any connectors attached to it
- A diagram and all its elements, or
- A Package and all its diagrams and elements

To do this, click on the element, diagram or Package and then select:

- 'Design > Model > Manage > **Validate** > Validate Current Package'

The '**Model Validation** status' dialog displays, showing the progress of the validation.

Validation Messages for Elements

These error messages can be output by the validation of a Zachman Framework element.

Messages

Element	Diagram and Message
Event Node	Event Schedule Message: Event Nodes must be used only with Business Cycles Meaning: An Event Node has been used with elements other than Business Cycle.
Event Node	Event Schedule Message: Message triggered Event Node must have a message defined Meaning: An Event Node with the 'Trigger' Tagged Value set to 'Message' does not have the 'MessageDetail' Tagged Value set.
Event Node	Event Schedule Message: Rule triggered Event Node must have Rule defined

	<p>Meaning: An Event Node with the 'Trigger' Tagged Value set to 'Rule' does not have the 'Rule' Tagged Value set.</p>
Event Node	<p>Event Schedule</p> <p>Message: Error triggered Event Node must have the Error defined</p> <p>Meaning: An Event Node with the 'Trigger' Tagged Value set to 'ErrorDetail' does not have the 'Error' Tagged Value set.</p>
Event Node	<p>Event Schedule</p> <p>Message: Multiple triggered Event Node must have a defined list of Triggers</p> <p>Meaning: An Event Node with the 'Trigger' Tagged Value set to 'Multiple' does not have the 'Trigger' Tagged Value set.</p>
Business Cycle	<p>Event Schedule</p> <p>Message: Business Cycles must have Event Nodes defined</p> <p>Meaning: A Business Cycle element does not have any Event Nodes defined.</p>
Goal	<p>Business Motivation/ Strategy Map</p> <p>Message: Goal not realized</p>

	Meaning: A Goal has no relationship defined with other model artifacts.
Strategy	Business Motivation/ Strategy Map Message: Strategy not realized Meaning: A Strategy has no relationship defined with other model artifacts.

Validation Messages for Connectors

These error messages can be output by the validation of a Zachman Framework connector.

Messages

Connector	Diagram and Message
Association	Data Map Message: DataMap Association must have a valid source element Meaning: An Association has a source element other than Principal Entity, Structure Entity or Intersecting Entity.
Association	Data Map Message: DataMap Association must have a valid target element Meaning: An Association has a target element other than Principal Entity, Structure Entity or Intersecting Entity.
Association	Data Map Message: Possibility of an Intersecting entity < name> which might represent a

	<p>Potential Business Process exists – This is a warning message.</p> <p>Meaning: An Association has a many-to-many relationship, informing that the relationship could be normalized.</p>
Strategy Link	<p>Strategy Map</p> <p>Message: Strategy Map Association must have a valid source element</p> <p>Meaning: A Strategy Link has a source element other than Strategy and Goal.</p>
Strategy Link	<p>Strategy Map</p> <p>Message: StrategyMap Association must have a valid target element</p> <p>Meaning: A Strategy Link has a target element other than Strategy and Goal.</p>

Validation Messages for Diagrams

These error message can be output by the validation of a Zachman Framework diagram.

Messages

Diagram	Message
Data Map	Entities must have relations in DataMap Meaning: In the Data Map diagram there are entities with no relationships defined.

Licencing Copyright and Trademarks

