
# MDG Technology For Zachman Framework User Guide

*The MDG Technology For Zachman Framework Add-In enables Enterprise Architect users to benefit from the Zachman Framework within a powerful modeling environment that is based on open standards.*

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## Introduction

***by Nithiya Ugavina***

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# MDG Technology for Zachman Framework
# User Guide



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# Foreword

This user guide provides an introduction to the features contained in the MDG Technology for Zachman Framework.

# 1 Welcome


Welcome to the *MDG Technology for Zachman Framework* – Enterprise Architect Add-In, Version 1.1.

This Add-In enables Enterprise Architect users to employ the Zachman Framework with the associated benefits of a powerful, open-standard modeling system.

## 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.

The Zachman Framework, while conceptually simple, 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 www.zifa.com.

## Getting Started

For instructions on how to start using the MDG Technology for Zachman Framework, see Getting Started 9 and Using MDG Technology for Zachman Framework 10.

### See Also


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- System Requirements 8

## 1.1 Copyright Notice



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

### Trademark of John A. Zachman and Zachman International

- The Zachman Framework For Enterprise Architecture™

## 1.4 Support

Technical support for the MDG Technology for Zachman Framework 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 Zachman Framework version 1.1 runs under the following environments:

### Operating Systems Supported

- Windows NT® (SP5 or later)
- Windows ME
- Windows 2000 Professional (SP3 or later)
- Windows Vista (32 bit)
- Windows 2003
- Windows XP Professional
- Windows XP Home
- Windows XP Media Edition
- Windows XP Tablet Edition

### Enterprise Architect Versions Supported

- Enterprise Architect Professional, Version 7.1 (or later)
- Enterprise Architect Corporate, Version 7.1 (or later)

# 2 Getting Started

When you install the MDG Technology for Zachman Framework, it is fully enabled and ready to use.

## Access the MDG Technology For Zachman Framework

1. Create a new Enterprise Architect project file.
2. From the Add Model Wizard select **MDG Technology for Zachman Framework**.
3. From the Name panel, select the **Zachman Framework Model**.
4. Click on the **OK** button.

A new base model for the Zachman Framework is created, displaying the Zachman Interface diagram 11.

**See Also**

- Using MDG Technology for Zachman Framework 10
- Model Template 13

# 3 Using MDG Technology For Zachman Framework

The MDG Technology for Zachman Framework 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 cell of the Zachman classification framework.

The Add-In also provides model validation and reporting capabilities for strategic project plans.

Enterprise Architect enables you to 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.

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

For a demonstration of the MDG Technology For Zachman Framework in use, run the video on:

http://sparxsystems.com/resources/demos/ZachmanFramework/Zachman_Framework.htm

This User Guide provides a detailed exploration of the MDG Technology for Zachman Framework tools and features, such as.

- The example Enterprise Architect model 12 for the Zachman Framework
- UML profiles (toolbox pages) 17 for use within specific Zachman Framework cells
- A diagram interface 11 for the Zachman Framework
- New diagram 15 types specific to the Zachman Framework
- A flexible model starter-structure 13
- Report generation 36 capabilities for strategic project plans
- A Zachman Framework page in the Enterprise Architect Tasks Pane 31, helping you to perform work specific to the Framework, such as Data Map Analysis.

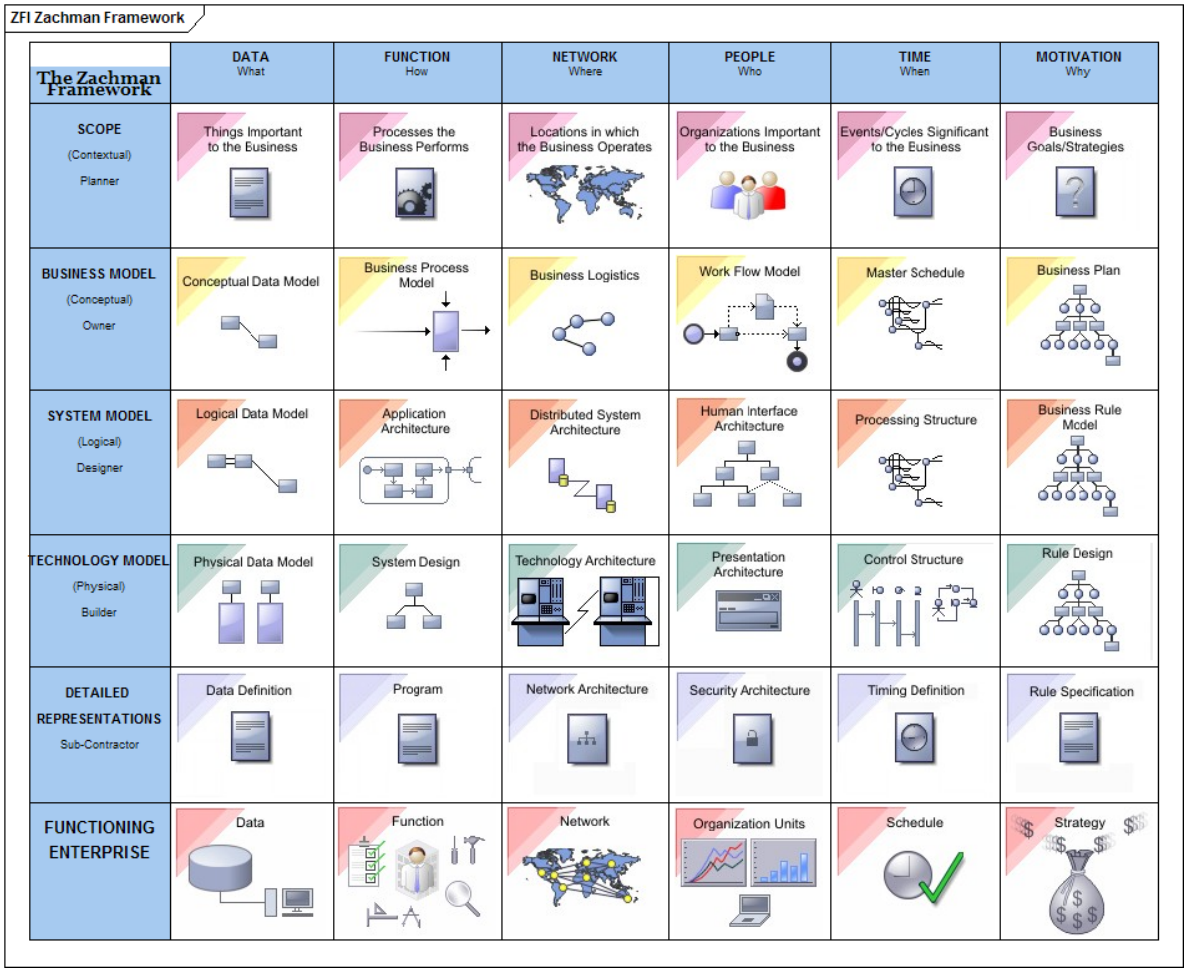
Note that the MDG Technology For Zachman Framework is integrated with the features of Enterprise Architect, which are documented in the *Enterprise Architect User Guide*.

## 3.1 The Zachman Framework Interface Diagram

The Zachman Framework is a predefined model in Enterprise Architect. The model-level diagram of the model structure 12 is the *Zachman Framework Interface* diagram (shown below), 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.

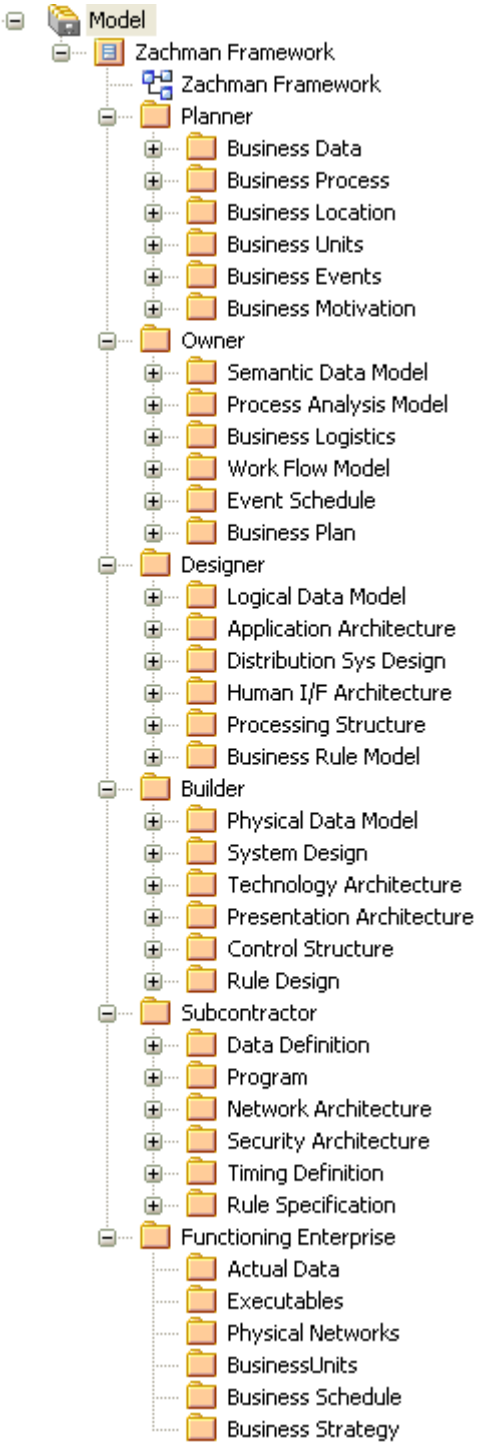
*The Zachman Framework Interface Diagram*



## 3.2 Model Structure

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

Each Zachman Perspective (or row) is modeled as the highest-level package inside the Framework model. Cells belonging to the Perspectives are modeled as child packages to the respective row package.

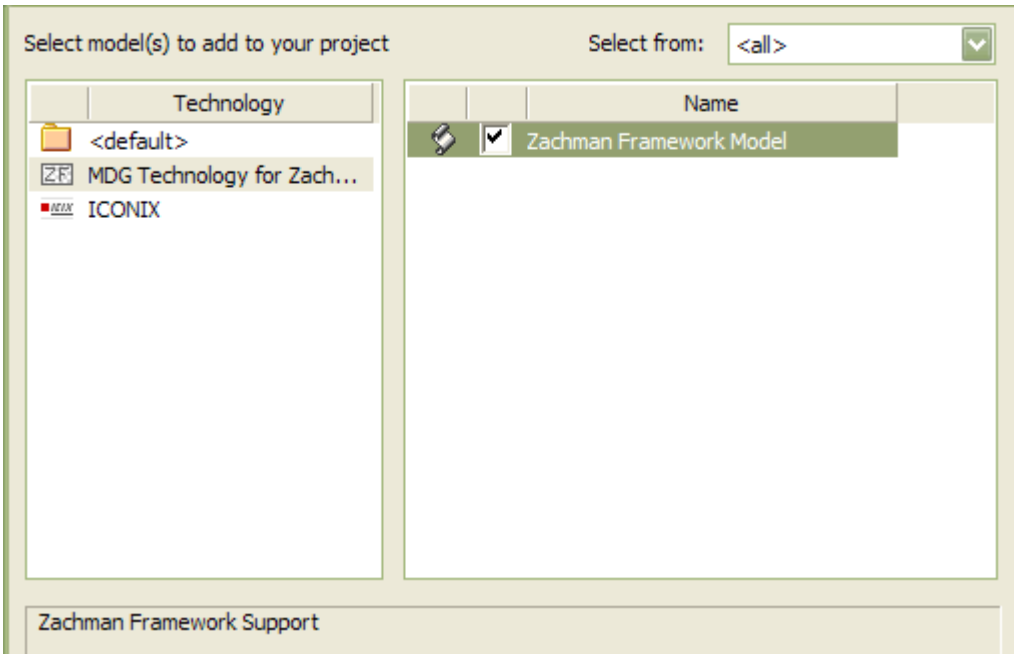


## 3.3 Model Template

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

To add a new Zachman Framework model to the project:

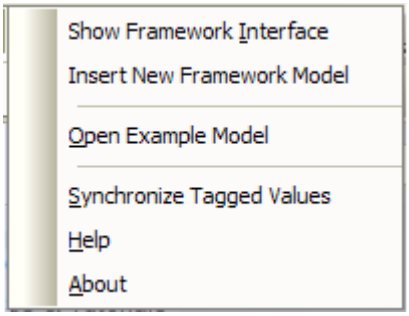
1. Right-click on the root node and select the **Add Model using Wizard** context menu option. The Select model(s) dialog displays.




2. Select **MDG Technology for Zachman Framework** from the Technology pane.
3. Select the **Zachman Framework** model.
4. Click on the **OK** button.

## 3.4 Add-In Menu

The **Zachman Framework Technology** sub-menu is available from the **Add-Ins** menu on the main menu bar.




| Menu Option | Use to |
|---|---|
| **Show Framework Interface** | Open the Zachman Framework interface diagram. |
| **Insert New Framework Model** | Create a new Zachman Framework template model under the selected package. |
| **Open Example Model** | Load the example Zachman Framework model. |
| **Synchronize Tagged Values** | Add missing Tagged Values to all elements in the model that require them.<br>Select this option whenever a new element is created by any means other than directly dropping the element from the Zachman Framework 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 Zachman Framework profile.<br>See *Synchronize Tags And Constraints* in the *Enterprise Architect User Guide*. |
| **Help** | Displays the MDG Technology for Zachman Framework Help. |
| **About** | Displays the version information for the MDG Technology for Zachman Framework. |

**Tip:**

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

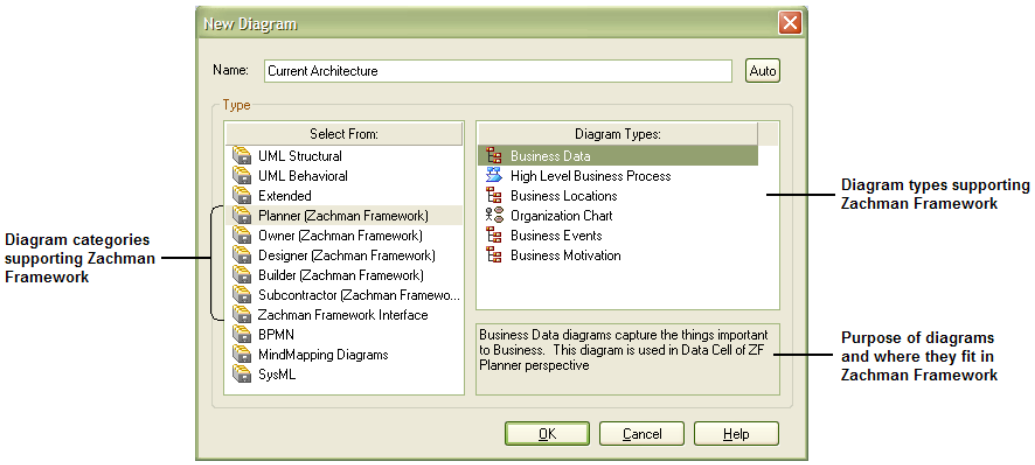
- Selecting the **Add-Ins | Manage Add-Ins** menu option and ensuring that you have selected the **Zachman Framework Load on Startup** checkbox on the Manage Add-Ins dialog.
- Resetting Enterprise Architect's menus with the **View | Visual Layouts | Default Layout** menu option.

## 3.5 Diagrams

The MDG Technology introduces new diagram types 16 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; see the *Enterprise Architect User Guide* for further details.

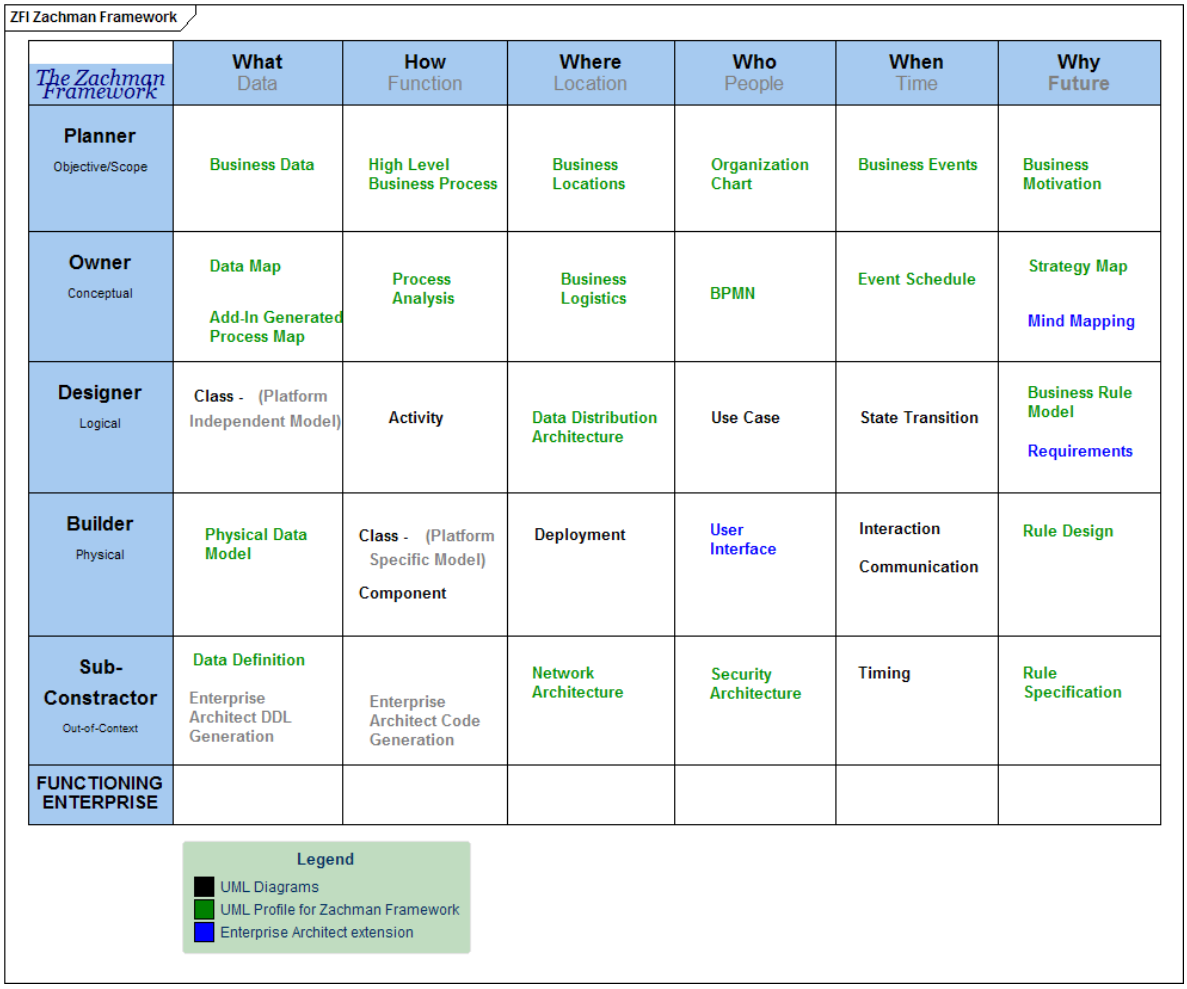
Loading the Zachman Framework Add-In provides access to the following *categories* of diagram through the New Diagram dialog:

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



## 3.6 Diagram Types

The MDG Technology for Zachman Framework further extends the Enterprise Architect diagram set to support the Framework. The following illustration shows the diagram types appropriate to each cell of the Zachman Framework.



## 3.7 The Zachman Framework Toolbox

The Zachman Framework pages of the Enterprise Architect UML Toolbox provide elements and relationships for all the Zachman Framework diagrams that the MDG Technology supports.

The Zachman Framework Toolbox pages can be accessed using the **More tools | Zachman Framework** menu option. They can be docked on either side of the diagram, or free floated on top of the diagram to expose more surface for editing.

The following table shows, for each Zachman Framework cell, the diagram that could be used and its associated Enterprise Architect UML Toolbox page.

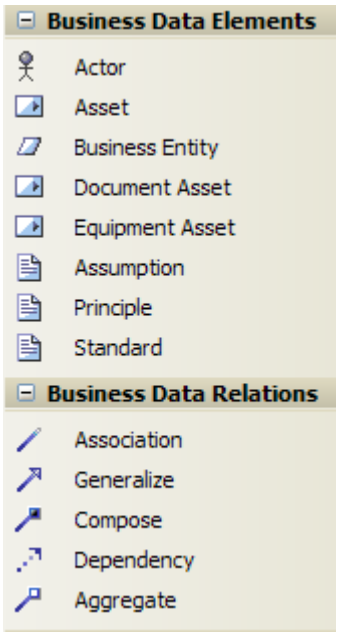
| Zachman Cell | Diagram | Toolbox Page |
|---|---|---|
| Planner-Data | Business Data | Business Data 18 |
| Planner – Function | Business Process | Business Process 19 |
| Planner - Location | Business Locations | Business Locations 19 |
| Planner - People | Organization Chart | Organization Chart 21 |
| Planner - Timing | Business Events | Business Events 21 |
| Planner - Motivation | Business Motivation | Business Motivation 20 |
| Owner - Data | Data Map<br>Process Map -Generated by Add-In | Data Map 22 |
| Owner – Function | Process Analysis | Enterprise Architect Extended - Analysis* |
| Owner - Location | Business Logistics | Business Logistics 22 |
| Owner - People | BPMN | BPMN 23 |
| Owner - Timing | Event Schedule | Event Schedule 25 |
| Owner - Motivation | Strategy Map<br>Enterprise Architect - Mind Mapping diagram | • Strategy Map 25<br>• Enterprise Architect - Mind Mapping |
| Designer - Data | Class | UML - Class* |
| Designer – Function | Activity | UML Activity* |
| Designer - Location | Data Distribution Architecture | Data Distribution Architecture 26 |
| Designer - People | Use Case | UML - Use Case* |
| Designer - Timing | State Transition | UML - State* |
| Designer - Motivation | Business Rule Model | Business Rule Model 27 |
| Builder - Data | Physical Data Model | Enterprise Architect Extended - Data Modeling* |
| Builder – Function | Class<br>Component | UML - Class*<br>UML - Component* |
| Builder - Location | Deployment | UML - Deployment* |
| Builder - People | User Interface | Enterprise Architect Extended - User Interface* |
| Builder - Timing | Interaction<br>Communication | UML - Interaction*<br>UML - Communication* |
| Builder - Motivation | Rule Design | Rule Design 28 |
| Subcontractor - Data | Data Definition | No toolbox defined. Default toolbox for the diagram is Enterprise Architect Extended - Custom* |

| Zachman Cell | Diagram | Toolbox Page |
|---|---|---|
| Subcontractor – Function | No diagram defined – Code generation is done in this cell. | Not Applicable |
| Subcontractor - Location | Network Architecture | Network Architecture 28 |
| Subcontractor - People | Security Architecture | UML - Class* |
| Subcontractor - Timing | Timing | UML - Timing* |
| Subcontractor - Motivation | Rule Specification | Rule Specification 29 |

**Note:**

Links marked with an asterisk (*) display information from the *Enterprise Architect User Guide*.

### 3.7.1 Business Data Pages

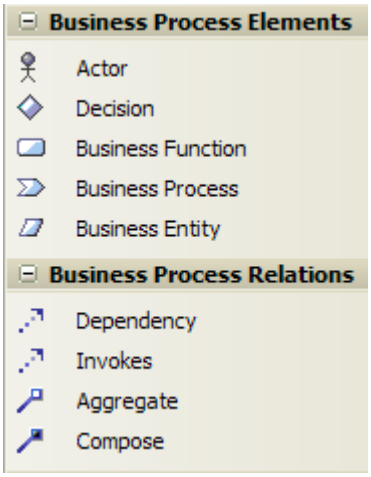



| Item | Description |
|---|---|
| **Actor** | Used to model a stakeholder or any other human resource of the enterprise. |
| **Asset** | Captures the enterprise resources that could be estimated for value. |
| **Business Entity** | Generic element to capture enterprise resources. |
| **Document Asset** | Subtype of Asset to capture the important documents of the enterprise. |
| **Equipment Asset** | Subtype of Asset to capture the equipment resources of the enterprise. |
| **Assumption** | Used to capture the assumptions made in information manipulation. Tag Value Type = *Enterprise / Business / System / Application / Technology / Data.* |
| **Principle** | Used to define 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.* |

**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.

### 3.7.2 Business Process Pages

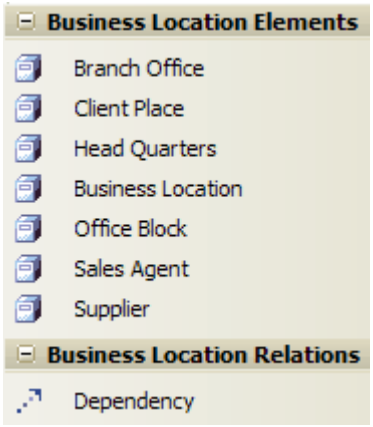



| Item | Description |
|---|---|
| **Actor** | Used to model a stakeholder or any other human resource of the Enterprise. |
| **Decision** | Indicates point of conditional progression where a business decision is taken. |
| **Business Function** | A major function performed by the Enterprise or a part 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.

### 3.7.3 Business Location Pages



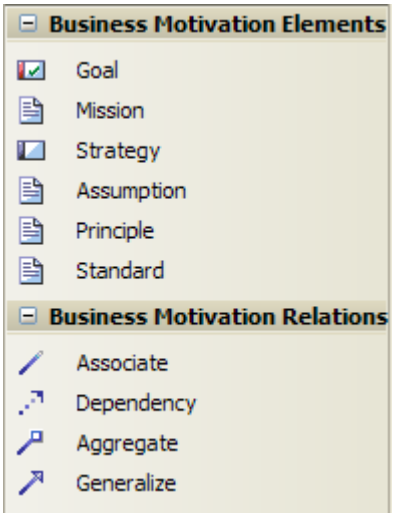

| Item | Description |
|---|---|
| **Branch Office** | Subtype of Business Location. |
| **Client Place** | Subtype of Business Location. |
| **Head Quarters** | Subtype of Business Location. |

| Item | Description |
|---|---|
| **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. |

**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.

### 3.7.4 Business Motivation Pages




| Item | Description |
|---|---|
| **Goal** | Element to capture what is to be achieved by the enterprise, with specifications defined by the Tagged Values. |
| **Mission** | Element to capture the mission statement, policies and values of the enterprise. |
| **Strategy** | Element to capture the strategy statements for the business plan. |
| **Assumption** | Used to capture the assumptions made in information manipulation. Tag Value Type = *Enterprise / Business / System / Application / Technology / Data.* |
| **Principle** | Used to define 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.* |

**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.

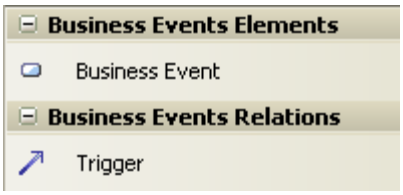
### 3.7.5 Organization Chart Pages


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

**Note:**

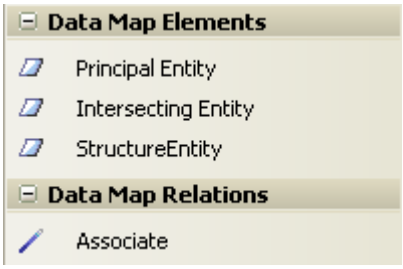
Elements and connectors common to Enterprise Architect UML and Extended diagrams are not documented here. See the *Enterprise Architect User Guide* for information on these.

### 3.7.6 Business Events Pages




| Item | Description |
|---|---|
| **Business Event** | Element to capture major business events of the enterprise. |
| **Trigger** | Used to indicate that a Business Event triggers another event or a business process. |

### 3.7.7 Data Map Pages

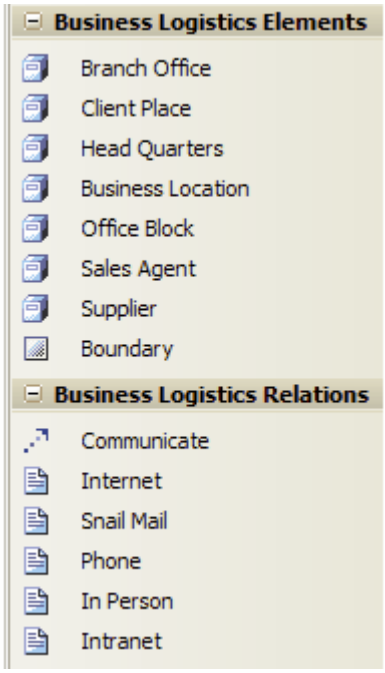



| Item | Description |
|---|---|
| **Principal Entity** | A business entity that forms a resource of the enterprise. |
| **Intersecting Entity** | Normalizes the many-to-many relationship between principal entities. |
| **Structure Entity** | Captures potential knowledge base entities. |

**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.

### 3.7.8 Business Logistics Pages



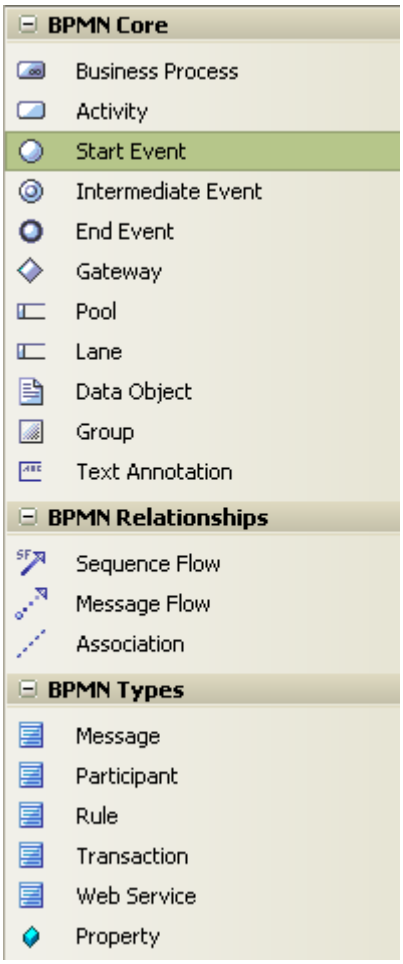

| Item | Description |
|---|---|
| **Branch Office** | Subtype of Business Location. |
| **Client Place** | Subtype of Business Location. |
| **Head Quarters** | Subtype of Business Location. |
| **Business Location** | Models the location from which the business operates. |
| **Office Block** | Subtype of Business Location. |

| Item | Description |
|---|---|
| **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.

### 3.7.9 BPMN Pages




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. |
| **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 Zachman version above. To make even further use of BPMN facilities, download the BPMN Add-In from:

http://www.sparxsystems.com/products/mdg_bpmn.html

### 3.7.10 Event Schedule Pages


| Item | Description |
|---|---|
| **Business Event** | Element to capture major business events of the enterprise. |
| **Business Cycle** | Element to capture major business cycles of the enterprise. |
| **Event Node** | Element to capture the event points in a business cycle. |

**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.

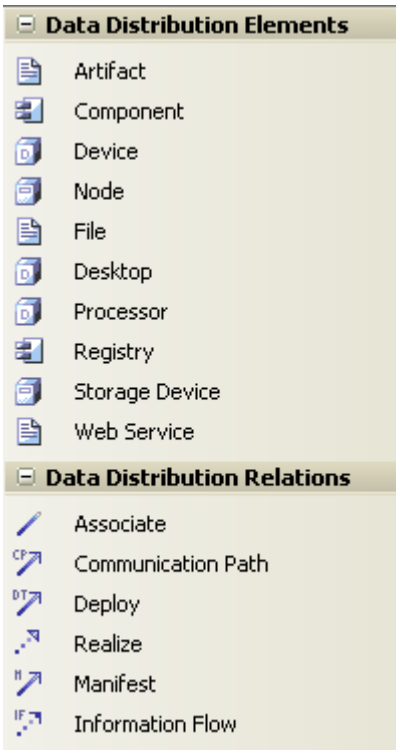
### 3.7.11 Strategy Map Pages


| Item | Description |
|---|---|
| **Strategy** | Element to capture the strategy statements for the business plan. |
| **Goal** | Element to capture what is to be achieved by the enterprise with specifications defined by the Tagged Values. |
| **Business Perspective** | Element to relate the strategies to a specific category. |
| **Strategy Link** | Connector to indicate that a strategy is linked to another strategy or goal. |

**See Also**

- Business Scorecards 36

## 3.7.12 Data Distribution Architecture Pages




| Item | Description |
|---|---|
| **File** | Element to represent a file. |
| **Desktop** | Element to represent a desktop. |
| **Processor** | Element to represent a processor. |
| **Registry** | Element to represent a registry. |
| **Storage Device** | Element to represent a storage device. |
| **Web Service** | Element to represent a web service. |

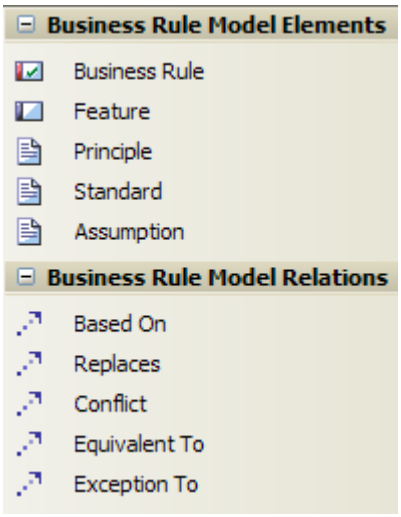
**Note:**

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.

**See Also**

- Deployment Pages in the *Enterprise Architect User Guide*

### 3.7.13 Business Rule Model Pages

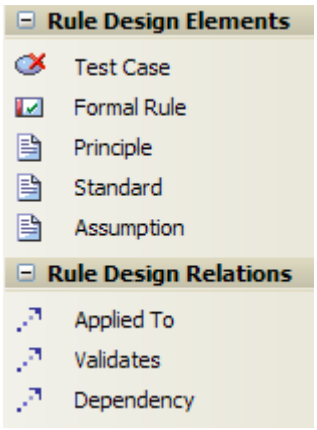



| Item | Description |
|---|---|
| **Business Rule** | Element to capture the Business Rule statements. |
| **Principle** | Used to define the principles framed and followed in the Enterprise. Tag Value Type = *Enterprise / Business / System / Application / Technology / Data.* |
| **Standard** | Used 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.* |
| **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. |

**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.

## 3.7.14 Rule Design Pages




| Item | Description |
|---|---|
| **Formal Rule** | A business rule transformed to a technology-specific logical rule or constraint statement. |
| **Principle** | Used to define 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. |

**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.

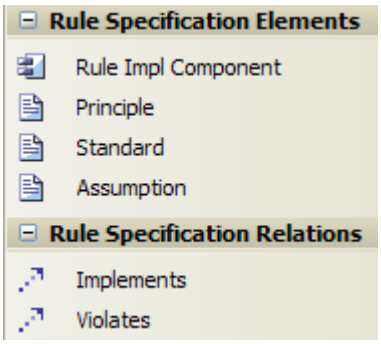
## 3.7.15 Network Architecture Pages


**Note:**

For further information on the two elements, see the *Enterprise Architect User Guide*.

| 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. |

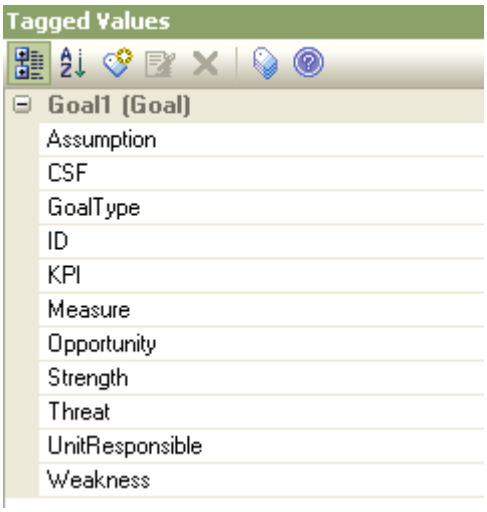
### 3.7.16 Rule Specification Pages




| Item | Description |
|---|---|
| **Rule Impl Component** | Element to capture the component implementing a rule. |
| **Principle** | Used to define 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.* |
| **Implements** | Indicates that a *Rule Impl Component* implements a rule. |
| **Violates** | Indicates that the rule is violated by the connecting model element. |

## 3.8 Tagged Values

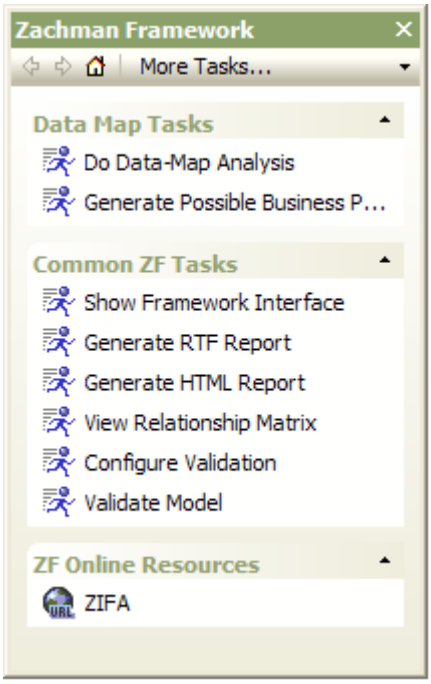
The MDG Technology makes extensive use of Tagged Values to assign custom properties to the various Zachman Framework elements. It is recommended that you keep the Tagged Values window docked and visible at all times when creating or viewing a Zachman Framework model.




To open the Tagged Values window, 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*.

## 3.9 Tasks

When the MDG Technology for Zachman Framework is loaded, the Enterprise Architect Tasks Pane provides a page of Zachman Framework tasks.




The common Zachman Framework tasks are .

| Item | Description |
|---|---|
| Data Map Tasks | *This group of commands is functional only when a Data Map diagram is open and active.* |
| **Do Data-Map Analysis** 32 | Invokes the Technology functionality to analyze the Data Map diagram. This task generates Cluster Reports 33 and Process Maps 34 from a valid Data Map diagram. |
| **Generate Possible Business Process** | Invokes the Add-In functionality to identify and generate possible business processes from a valid Data Map diagram, in the same package as the diagram. |
| Common ZF Tasks | *This group of commands is functional for all the cells of the Framework.* |
| **Show Framework Interface** | Opens the Zachman Framework Interface diagram 11. When there are several framework models in a project, a list of available framework diagrams displays. You can select the required diagram from this list. |
| **Generate RTF Report** | Invokes the Enterprise Architect RTF report generation functionality. |
| **Generate HTML Report** | Invokes the Enterprise Architect Generate HTML Report dialog. |
| **View Relationship Matrix** | Opens the Enterprise Architect Relationship Matrix. |
| **Configure Validation** 38 | Opens the Enterprise Architect Model Validation Configuration dialog. |
| **Validate Model** 38 | Validates the model against the configured rules. |
| ZF Online Resources | *This group of options provides links to online resources.* |
| **ZIFA** | Link to the Zachman Framework For Enterprise Architecture™ website. |

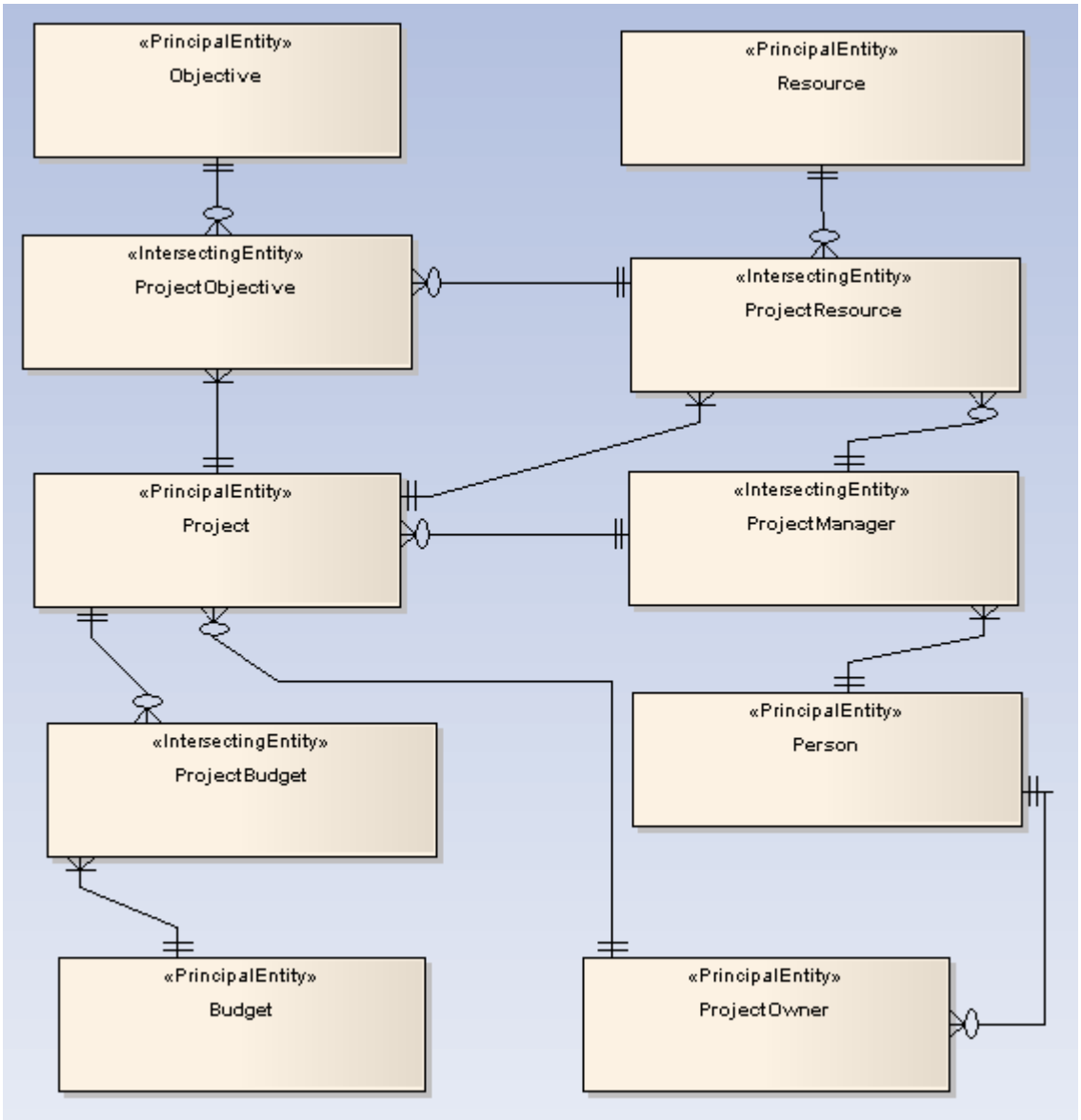
## 3.9.1 Data Map Analysis

### Introduction

Cluster Reports 33 and Process Maps 34 are deliverables of a valid Data Map diagram 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.

An example of a valid Data Map diagram is provided below:



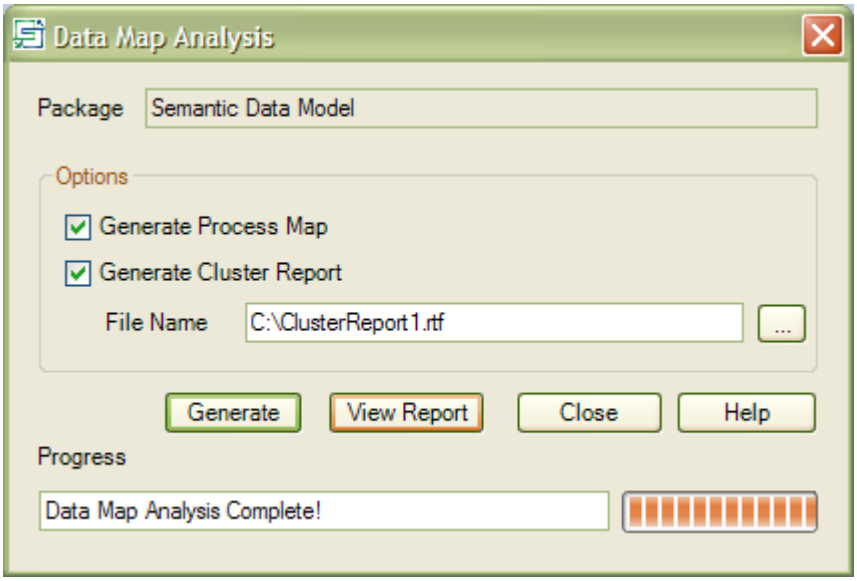

### Procedure

To perform a Data Map diagram analysis, select any one of the options below, with the Data Map diagram to be analysed open and active:

- Select the **Add-Ins | Zachman Framework | Do Data-Map Analysis** main menu option
- Right-click on the Data Map diagram in the Enterprise Architect Project Browser, and select the **Add-Ins | Zachman Framework | Do Data-Map Analysis** context menu option.

- Select the command from the Enterprise Architect Tasks Pane 31 (Data Map Tasks | **Do Data-Map Analysis**).

The Data Map Analysis dialog displays.

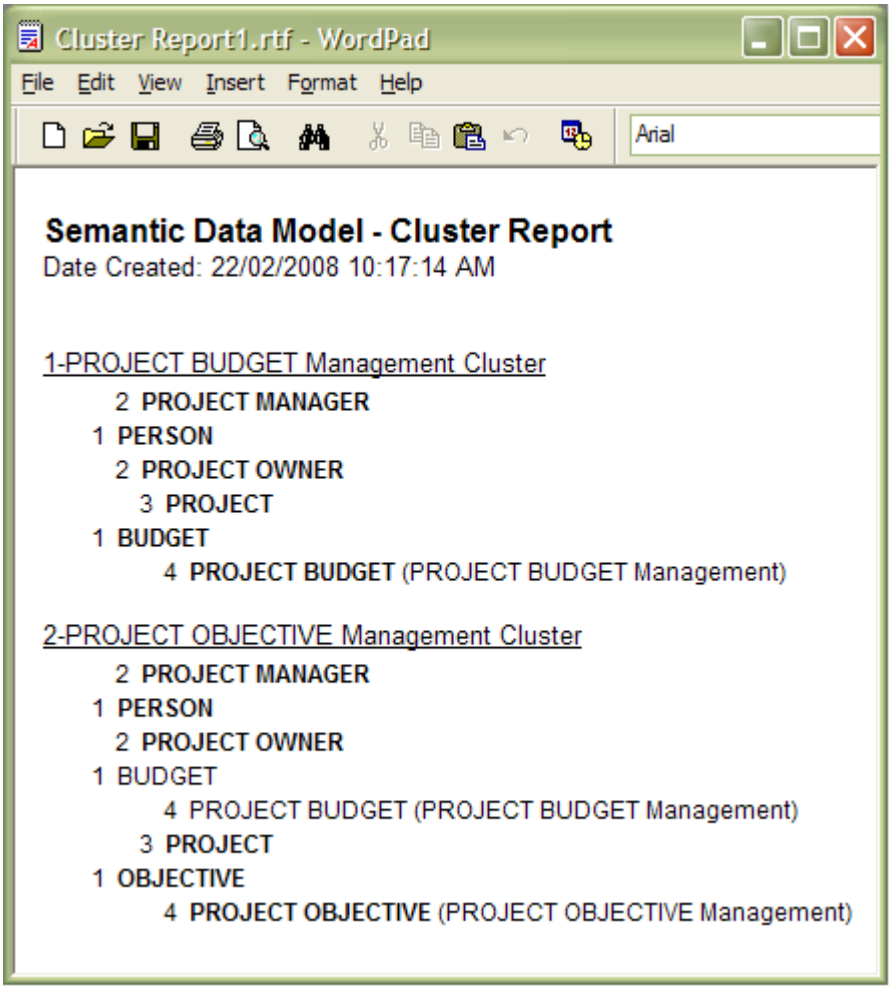



Click on the checkbox against each deliverable required. If you have selected **Generate Cluster Report**, also enter the file pathname under which to save the report. Click on the **Generate** button.

### 3.9.2 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.

The following is a *Cluster Report* generated for the sample Data Map diagram 32.




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 one 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.

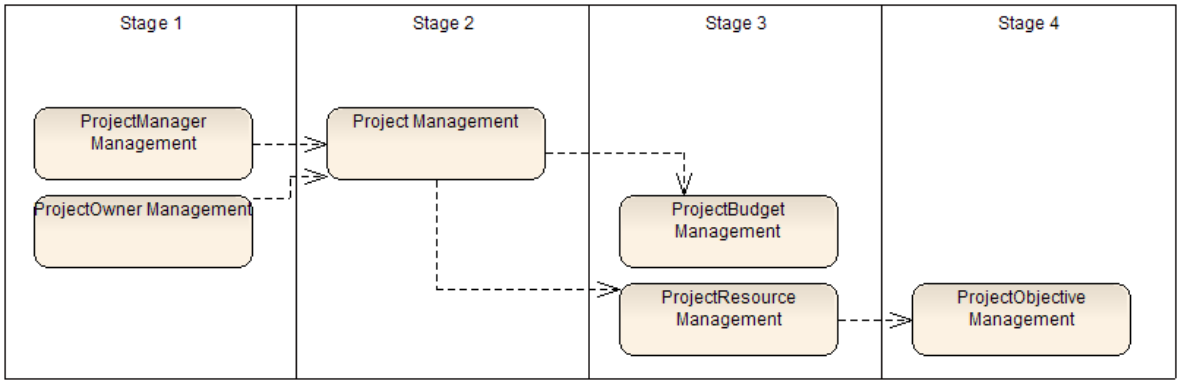
**Acknowledgement:**

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

### 3.9.3 Process Map

A *Process Map* is the visual model of the *Cluster Report* 33; 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.

Below is the Process Map generated for the sample Data Map diagram 32.



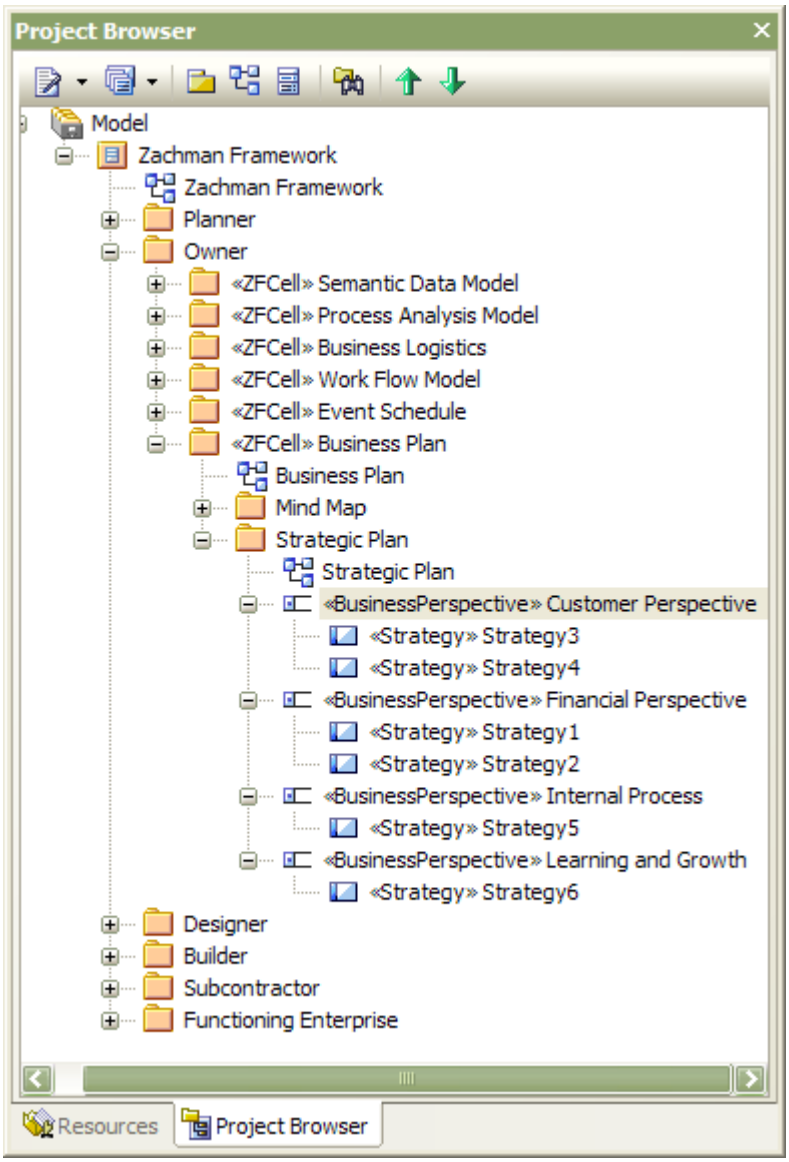
## 3.10 Business Scorecards

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

### Procedure:

To generate a Business Scorecard, follow the steps below:

1. In the Project Browser, click on the package containing your Business Perspectives and Strategies (an *Owner* | *Business Plan* | *Strategic Plan* package).




**Note:**

The Business Perspectives must own the respective strategies, as shown above.

2. Either:
   - Press **[F8]**
   - Select the **Project | Documentation | Rich Text Format (RTF) Report** context menu option
   - Right-click on the package and select the **Documentation | Rich Text Format (RTF) Report** context menu option, or
   - Open the Tasks Pane and, in the Common Tasks panel, select the **Generate RTF Report** option.

The Generate RTF 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.

**Note:**

For an introduction to generating RTF documentation, see the *RTF Documentation* topic in the *Enterprise Architect User Guide*.

# 4 Model Validation

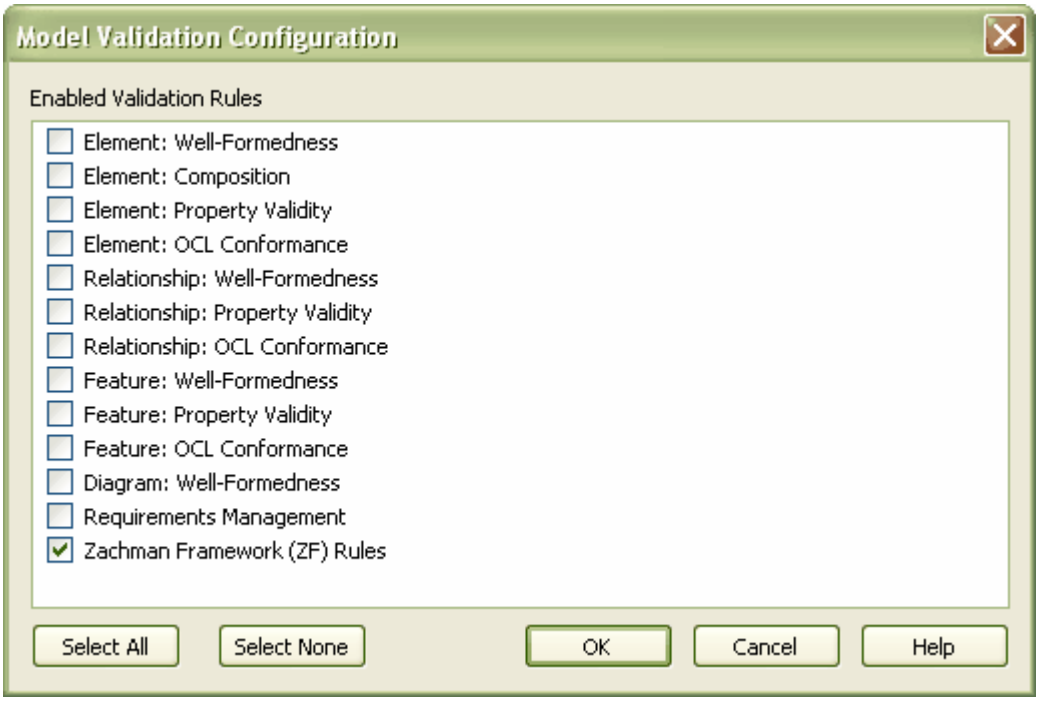
## Configure Model Validation

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

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

- **Project | Model Validation | Configure** main menu option, or the
- **Configure Validation** task from the Zachman Framework - ZF Tasks page of the Tasks Pane.

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

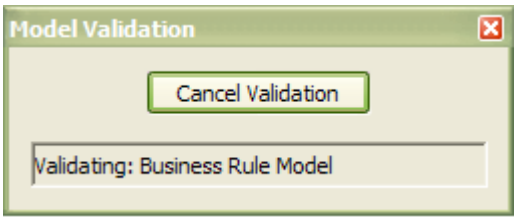
You can validate, against the Zachman Framework rules:

- 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 the:

- **Project | Model Validation | Validate Selected** main menu option, or
- **Validate Model** task from the Zachman Framework - ZF Tasks page of the Tasks Pane.

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



## Validation Error Messages

For an explanation of any error messages that might display during validation, see the following topics:

- Validation Messages for Elements 40
- Validation Messages for Connectors 41
- Validation Messages for Diagrams. 42

**Note:**

A Zachman Framework model might trigger additional UML validation error messages; for more information on UML Model Validation, see the *Enterprise Architect User Guide*.

## 4.1 Validation Messages for Elements

The following error messages could be output by the validation of a Zachman Framework element.

| Element | Diagram | Message | Meaning |
|---|---|---|---|
| Event Node | Event Schedule | *Event Nodes must be used only with Business Cycles* | An Event Node has been used with elements other than Business Cycle. |
| Event Node | Event Schedule | *Message triggered Event Node must have a message defined* | An Event Node with the *Trigger* Tagged Value set to *Message* does not have the *MessageDetail* Tagged Value set. |
| Event Node | Event Schedule | *Rule triggered Event Node must have Rule defined* | An Event Node with the *Trigger* Tagged Value set to *Rule* does not have the *Rule* Tagged Value set. |
| Event Node | Event Schedule | *Error triggered Event Node must have the Error defined* | An Event Node with the *Trigger* Tagged Value set to *ErrorDetail* does not have the *Error* Tagged Value set. |
| Event Node | Event Schedule | *Multiple triggered Event Node must have a defined list of Triggers* | An Event Node with the *Trigger* Tagged Value set to *Multiple* does not have the *Trigger* Tagged Value set. |
| Business Cycle | Event Schedule | *Business Cycles must have Event Nodes defined* | A Business Cycle element does not have any Event Nodes defined. |
| Goal | Business Motivation/ Strategy Map | *Goal not realized* | A Goal has no relationship defined with other model artifacts. |
| Strategy | Business Motivation/ Strategy Map | *Strategy not realized* | A Strategy has no relationship defined with other model artifacts. |

## 4.2 Validation Messages for Connectors

The following error messages could be output by the validation of a Zachman Framework connector.

| Connector | Diagram | Message | Meaning |
|---|---|---|---|
| Association | Data Map | *DataMap Association must have a valid source element* | An Association has a source element other than Principal Entity, Structure Entity or Intersecting Entity. |
| Association | Data Map | *DataMap Association must have a valid target element* | An Association has a target element other than Principal Entity, Structure Entity or Intersecting Entity. |
| Association | Data Map | *Possibility of An Intersecting entity < name> which may represent a Potential Business Process exists – This is a warning message.* | An Association has a many-to-many relationship, informing that the relationship could be normalized. |
| Strategy Link | Strategy Map | *StrategyMap Association must have a valid source element* | A Strategy Link has a source element other than Strategy and Goal. |
| Strategy Link | Strategy Map | *StrategyMap Association must have a valid target element* | A Strategy Link has a target element other than Strategy and Goal. |

## 4.3 Validation Messages for Diagrams

The following error message could be output by the validation of a Zachman Framework diagram.

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

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# - R -



# - S -



# - T -

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