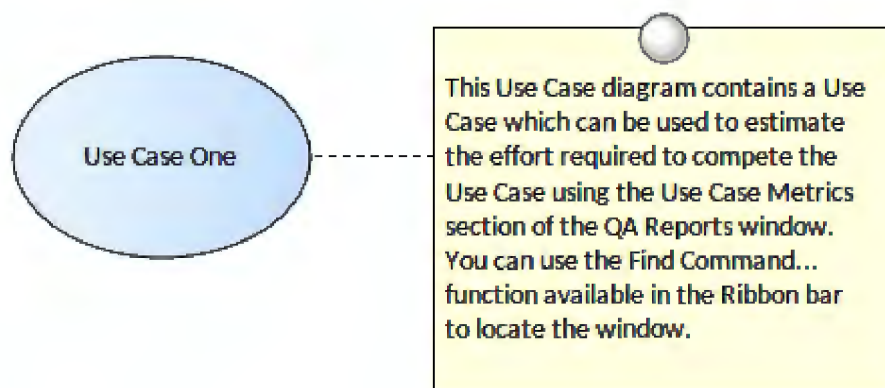# Estimation

The *Estimation* pattern creates a Use Case that in conjunction with the Use Case Metrics Facility can be used to calculate the amount of work required to completed the Use Case. The Use Case Metrics facility uses both Technical and Environmental Complexity factors and a method based on Use Case Points to calculate both the time and cost of the work.

Figure 1. Shows a Use Case with a note explaining how to open the Use Case Metrics section of the QA Report that can be used to define a number of values that will allow times and cost to be calculated.

Discussion

The pattern can be used to calculate the time and cost of implementation of a Use Case .The facility is a comprehensive project estimation tool that is used to calculate effort using Use Case and Actor elements. The complexity of the work environment is set using a series of weighted Technical and Environmental Complexity factors and Use Cases and Actors are given a rating that assigns their complexity as: Easy, Medium or Complex. The method is based on Karner's Use Case Points Method, and allows a metrics report containing the project estimation analysis to be produced and incorporated into project documentation.

The pattern is typically used during the planning phase and can be used to calculate the

required effort to complete an initiative or part of an initiative.

The following is a list of some things you may want to do when working with this pattern.

- Change the name of the Package and diagram to suit the initiative.
- Change the name of the Use Case to suit the initiative.
- Specify Environmental and Technical complexity factors.

The following is a list of some of the next steps available when applying the pattern.

- Assign weights and values that determine how they influence the effort that is calculated for an initiative.
- Apply the Metrics to other Use Case within the initiative.

Reference

The following help topics will assist you learn about how to work with this pattern.

Estimation

Business Analysis Body of Knowledge (BABOK)

Traceability Tools

Documentation

The following are some of the tools that will be helpful when working with this pattern.

Document Generator
The Document Generator is a powerful facility in Enterprise Architect that allows a Database Engineer or other stakeholder to create high quality corporate or technical documentation directly from the model, suitable for internal or external audiences. For more details see the Documentation help topic or the more general topic on Model Publishing.

Element Discussions
The Element Discussion facility is a fully featured collaboration tool allowing modelers and model viewers and reviewers to communicate with each other directly inside the repository. Modelers using the full client or occasional viewers using WebEA can both post and reply to discussions and communicate and engage in chat. For more details see

the Element Discussions help topic.

Specification View

The Specification View can be used as a way of working with any element type in a spreadsheet or word process view. It is particularly useful when there are a large number of elements as is typically the case when describing a system of any appreciable size. For more details see the Specification View help topic.

Relationship Matrix

The Relationship Matrix provides a spreadsheet like view of two groups of elements and the relationships that exist between them. It can be a used as a powerful analysis mechanism to visually indicate how elements are related to each other and to discover which elements are missing relationships. For more details see the Relationship Matrix help topic.

Traceability Window

The Traceability Window automatically displays the relationships that exist between Use Cases and other model elements including up-process and down-process elements. The traceability tree view can be conveniently expanded to see deeper relationships and elements displayed in the window can be located in all diagrams in which they appear. For more details see the Traceability Window help topic.