

## *Process Definition*

# **PEER-BASED ESTIMATING**

*Last Date Revised: 7/2/04*

*Version 1.3*

### **Process Description:**

Due to increased customer and management demands for on-time project performance, it is critical to create realistic estimates for resources and duration. While stable work is often easier to predict, any work that includes significant task deviation or unknowns becomes much more difficult. This process will reduce the risk of significant deviations by using the opinions of an experienced, informed peer group. This process is proven to create dependable and supportable project estimates.

### **Process Purpose:**

The intent of this estimating process is to...

- Clarify any uncertainty in the work to be performed (Domain of Effort)
- Clarify any uncertainty of the target to which the work will be applied (Domain of Study)
- Ensure objectivity in the final estimates
- Define the conditions upon which the estimates are created.
- Allow all members of the Project Team the opportunity to address their opinions
- Gain the commitment of the Project Team
- Provide a foundation for project planning, deployment and scheduling
- Establish a credible basis for the estimates to deflect reactions from the customer or management
- Provide a baseline against which actuals may be compared

### **Use Criteria:**

This process should be used whenever there are significant unknowns in project scope (Domain of Effort or Domain of Study). This process is also useful when there is disagreement about the resources or time required to complete project work. The process requires that task experts are available and will participate in creating the estimates. This process is not required when reliable, fixed planning data is available or stable metrics from previous projects may be applied.

### **Process Flow:**

1.0 PROCESS PREPARATION - Before an estimating session is convened, the Project Manager should...

1.1 Create an initial statement of scope.

1.1.1 Create a preliminary work decomposition that describes the Domain of Effort.

1.1.2 Identify the target for the work that describes the Domain of Study.

1.2 Create a list of activities that will be estimated

1.3 Compile an Estimating Team from members of the Project Team and other experts who may help improve the accuracy of the estimates. A Moderator and Scribe should be assigned for the estimating session.

1.4 Schedule the meeting time and location.

2.0 REVIEW ESTIMATING TARGET - At the beginning of the estimating session, the Project Manager reviews all compiled information that helps identify the estimating target and expectations. This includes...

- The list of activities that will be estimated
- A definition and quantity of the deliverables that must be produced
- The environment, customer or use for the deliverables
- The general Project Approach described in the Project Charter
- The Domain of Effort and Domain of Study
- The estimating units (hours/days/cost)
- If the estimate will be for the a single increment of work or the total effort

Norms and exceptions should be discussed for any of these topics. The Facilitator should also explain the Estimating Process. Each member of the Estimating Team should understand that they are not required to estimate specific work if they do not believe they are qualified to provide a credible response.

3.0 ROUND ONE: THE INITIAL ESTIMATES - Each member of the Estimating Team enters the estimating process with initial, often strong opinions about the work being estimated. Round One allows the Project Manager to collect these initial estimates without knowing who submitted each projection. This round should be conducted without attribution. Each member of the Estimating Team creates an estimate for each item on the list of activities and submits an Estimate Ballot. A scribe collects all the estimates for Round One and displays them for the Estimating Team on an Estimate Worksheet. This display should show each estimate, the highest estimate, the lowest estimate and the average of all estimates for each activity on the list. No comments should be entertained following this round.

4.0 ROUND TWO: ESTIMATE SUPPORT - Following Round One, each member of the Estimating Team compares their initial opinions with other participants. They then create their second set of estimates. When those have been collected and displayed by the Scribe, each member of the Estimating Team explains why they selected their projection. While some general questions and discussion may be allowed, great care must be taken to prevent the estimate's author from becoming defensive. The primary statement of this round is, "I created this estimate because..." This is the only round of estimates where the author of an estimate is known.

5.0 WORK DEFINITION REFINEMENT - It is common to recognize at this point that members of the Estimating Team have very different understandings of the work being

estimated. If this is found, the Moderator should guide the clarification of all work on the activities list.

**6.0 ROUND THREE: ESTIMATE CHALLENGES** - Each member of the Estimating Team creates their third estimate. Like Round One, these estimates should not be attributed to a specific author. When these estimates are collected and displayed, each participant may explain why they disagree with any number in the estimate range. The primary statement of this round is, "I disagree with the estimate because..."

**7.0 ROUND FOUR: FINAL ESTIMATES** - Each member of the Estimating Team creates their final set of estimates for all listed work. These estimates should be compiled and displayed with final averages. These estimate averages should be rounded up to the nearest meaningful measure and provided to the Project Manager.

**8.0 PROCESS CONCLUSION** - The Project Manager will now publish the result of the Estimating Process. Prior to publishing the results, it may be necessary to revise the estimates for specific conditions or deployment. A Estimate Scenario should be completed that documents the conditions, constraints, assumptions or resource characteristics that were used to create the estimate. Actuals should be tracked and compared against these estimates to validate the accuracy of the process and establish a foundation for metrics that may be used to feed future estimating processes.

## **Glossary:**

**Domain of Effort** – The type of work that will be performed by the project team

**Domain of Study** – The business areas or processes that will be included in the project.

**Estimating Team** – The group of people who will offer their expert opinion in forecasting the amount of time or cost required to complete the identified work.

**Facilitator** – The individual who officiates during the estimating process.

**Scribe** - The individual who records the results of the estimating process.

## **Templates and Tools:**

A template *Estimate Ballot* is attached and may be used to capture the estimates for a member of the Estimating Team for a specific round. One copy of the ballot should be retained by the estimator and the other given to the scribe.

A template *Estimate Worksheet* is attached and may be used to capture the results of each session. This document should be used to 1) record the estimates from each member of the Estimating Team, and 2) rank, average and display these estimates.

A template *Estimate Scenario* is attached and may be used to document any constraints, assumptions, resource characteristics or physical environment conditions that were used as a basis for the estimates.

## ESTIMATE BALLOT

Project ID / Name: \_\_\_\_\_

Stage ID / Name: \_\_\_\_\_

Project Manager: \_\_\_\_\_ Date: \_\_\_\_\_ Page No: \_\_\_\_\_

Activity/Description	Round 1 "Initial"	Round 2 "Explain"	Round 3 "Challenge"	Round 4 "Final"

**NAME / NOTES:**

# ESTIMATE WORKSHEET

Project ID / Name: \_\_\_\_\_

Stage ID / Name: \_\_\_\_\_

Project Manager: \_\_\_\_\_ Date: \_\_\_\_\_ Page No: \_\_\_\_\_

Activity/Description	Round 1 "Initial"	Round 2 "Explain"	Round 3 "Challenge"	Round 4 "Final"	N E T
<b>TOTALS</b>					

Notes:

## ESTIMATE SCENARIO

Project ID / Name: \_\_\_\_\_

Stage ID / Name: \_\_\_\_\_

Project Manager: \_\_\_\_\_ Date: \_\_\_\_\_ Page No: \_\_\_\_\_

### Constraints and Assumptions:

### Resource Characteristics:

Skill Type/Project Role	Skill Level	Quantity	Required Availability

### Physical Environment:

### Estimate Authors: