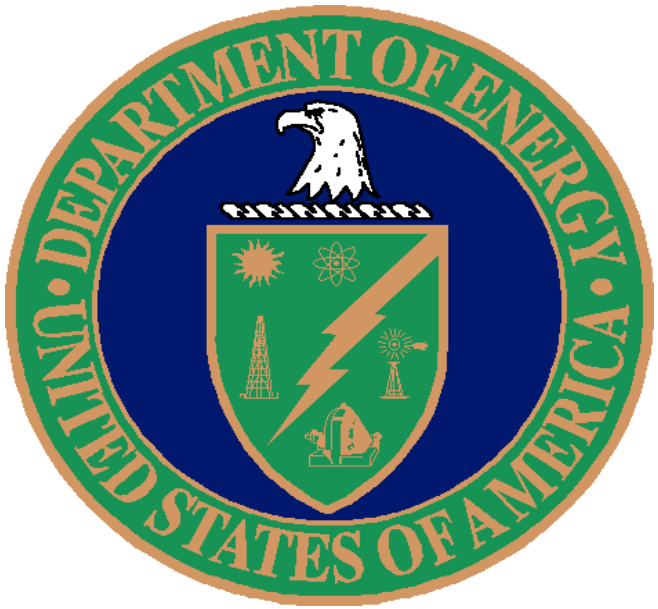

Earned Value Management Tutorial
Module 7: Integrated Baseline Review and Change Control

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Module 7: Integrated Baseline Review and Change Control

Welcome to Module 7. The objective of this module is to introduce you to the concepts of the Integrated Baseline Review Process and requirements for Change Control.

The Topics that will be addressed in this Module include:

- Definition of an Integrated Baseline Review (IBR)
- Integrated Baseline Review Objectives and Responsibilities
- Change Control Process

Review of Previous Modules

To review some critical terminology and define the framework within which IBRs are conducted, let's look back at the previous six modules.

- In Module 1 we introduced you to the basic concepts of an Earned Value Management System (EVMS)
- In Module 2 we discussed the Work Breakdown Structure (WBS), Organizational Breakdown Structure (OBS), and the integration of WBS and OBS to create the Responsibility Assignment Matrix (RAM)
- In Module 3 we discussed the development of the project schedule and the schedule baseline

Review of Previous Modules

- In Module 4 we discussed the Contract Budget Base (CBB), Performance Measurement Baseline (PMB), Control Account , Work Package, and Planning Package setup
- In Module 5 we discussed EVMS Criteria, EVMS Terminology, and Earned Value Methods
- In Module 6 we discussed Earned Value Metrics and Performance Measures

Integrated Baseline Review (IBR) Definition

Now let's discuss the Integrated Baseline Review (IBR), followed by the Change Control Process.

An Integrated Baseline Review (IBR) is a formal review led by the Government Program Manager and Technical Support Staff. An IBR is conducted jointly with the Government and their Contractor counterparts.

The purpose of an IBR is to

- verify the technical content of the Performance Measurement Baseline (PMB)
- assess the accuracy of the related resources (budgets) and schedules
- identify potential risks

Performance Measurement Baseline Review

Because the IBR uses the technical content of the Performance Measurement Baseline (PMB), it's important that you have a solid understanding of the PMB.

Remember the discussion on PMB from Module 4? Let's quickly review. The Performance Measurement Baseline (PMB) is the time-phased budget plan against which contract performance is measured.

Now that we've reviewed the PMB and defined the purpose of an IBR, let's discuss when an IBR is conducted.

Integrated Baseline Review (IBR) Timing

The initial Integrated Baseline Review is typically conducted within six months after contract award. Integrated Baseline Reviews will also be performed when work on a production option of a development contract begins or, at the discretion of the program manager, when a major modification to an existing contract significantly changes the existing PMB.

When a major event occurs within the life of a program such as a Critical Design Review (CDR), and a significant shift in the content and/or time-phasing of the PMB occurs, the Program Manager may conduct a review of the associated resources and schedules affected by the changes.

The IBR is intended to be a continuous part of the Program Management Process by both the Government and the Contractor.

Now let's review the specific IBR objectives, on the next page.

Integrated Baseline Review (IBR) Objectives

The Objectives of the Integrated Baseline Review are to:

- Ensure that the technical content of Control Account, Work Packages, and Planning Packages is consistent with the Contract Work Breakdown Structure (CWBS) and the Contract Statement of Work (SOW)
- Ensure that a logical sequence of effort planned is consistent with the contract schedule
- Assess the validity of allocated budgets in terms of work content, resources, and time-phasing
- Understand the earned value methods for measuring accomplishment and to verify that objective and meaningful performance data is provided in terms of technical accomplishment

Integrated Baseline Review (IBR) Objectives

Integrated Baseline Review Objectives (Continued)

- Verify that effective variance analysis processes are applied to identify, correct, and report problems including cost and schedule impacts
- Verify that proper accounting cross-checks are established so cost account data is accurately reflected in reports to the government
- Verify that cost, schedule, and technical systems are integrated
- Establish a forum through which the government program manager and the program technical staff gain a sense of ownership of the cost/schedule management process

Now that we've reviewed the IBR objectives, let's review some of the key documents required at an IBR. Check these out on the next page.

Integrated Baseline Review (IBR) Checklist

The following documents are typically provided by the Contractor to the Government for review during the Integrated Baseline Review:

- ✓Statement of Work (SOW)
- ✓Contract Work Breakdown Structure (CWBS)
- ✓CWBS Dictionary
- ✓Work Authorization Documents (WADs)
- ✓Control Account Plans (CAPs)
- ✓Integrated Master Schedule
- ✓Variance Thresholds for Reporting
- ✓Management Reserve Logs
- ✓Undistributed Budget Logs
- ✓Responsibility Assignment Matrix (RAM)
- ✓Earned Value Methods
- ✓ Earned Value Measurement Criteria
- ✓Organizational Breakdown Structure (OBS)

All of these documents were discussed in previous modules.

Integrated Baseline Review (IBR) Responsibilities

Now that we've discussed the key objectives for conducting an IBR and reviewed the IBR Checklist, let's review the responsibilities.

As the primary beneficiary of the IBR process, the Government Program Manager is responsible for the timeliness and successful execution of the review.

The Program Office Technical Team assesses the PMB and identifies risk areas. The Control Account Managers are responsible for the integrity and compliance of their Control Accounts/Work Packages.

Key Integrated Baseline Review (IBR) Concepts

Check your understanding by reviewing these key Integrated Baseline Review (IBR) Concepts:

- The IBR is an assessment of the contractor's Performance Measurement Baseline (PMB) and is conducted jointly by the Government and the Contractor.

- The IBR is conducted within six months of the award of a new contract or as required due to a major change to an existing contract.

- The responsibility for conducting the IBR lies with the Program Manager and the Program Office Technical Staff.

Integrated Baseline Review (IBR) Summary

In summary, the IBR facilitates an understanding of the overall technical, cost, and schedule processes. The Government and Contractor technical counterparts can jointly conduct recurring reviews of PMB planning, status, and Estimates at Completion (EAC) to ensure that baseline integrity is maintained throughout the life of the contract.

Now that we've discussed the Integrated Baseline Review Process, let's discuss what happens when there are changes made to the PMB and the Change Control Process used to track baseline changes. Take some time to review this on the following pages.

Change Control Overview

As we've discussed, the Performance Measurement Baseline (PMB) is the time-phased budget plan against which contract performance is measured. Meaningful performance measurement data require a documented PMB, which reflects the most current conditions of the program.

Once the Performance Measurement Baseline (PMB) is frozen or established, cost and schedule changes are processed through formal change control procedures. Authorized changes must be incorporated into the PMB in a timely manner and reflected in both budgets and schedules.

The Change Control Process is used to establish, analyze, communicate, and record approved changes to the program baseline.

Now let's discuss the specific objectives of a Change Control Process.

Change Control Objectives

The objectives of a Change Control Process are to:

- Document, track, and communicate changes to the Performance Measurement Baseline
- Reconcile current budgets to prior budgets in terms of changes to the authorized work in the detail needed by management for effective control
- Control retroactive changes to records pertaining to work performed that would change previously reported amounts for actual costs, earned value, or budgets. Adjustments should be made only for correction of errors, routine accounting adjustments, effects of customer or management directed changes, or to improve the baseline integrity and accuracy of performance measurement data
- Prevent revisions to the program budget except for authorized changes

Change Control: Baseline Changes

What types of baseline changes are subject to the change control process? Are all changes subject to it? Let's discuss types of baseline changes that would be subject to the change control process.

Baseline changes may occur as a result of

- contractual changes/modifications
- application of undistributed budget
- the use of management reserve
- re-planning
- formal reprogramming

We will examine each of these in more detail on the following pages, but first, take a look on the next page at the types of documentation that must be completed for these changes.

Change Control: Baseline Changes

Baseline changes must be documented and reflected in the Cost Performance Reports (CPRs) and Change Control Logs, and must be coordinated with the procuring agency.

Revised Work Authorization Documents (WADs), Revised Control Account Plans (CAPs), and Revision Request Forms are all required as part of the Change Control Process.

Revised Statement of Work (SOW) and Contract Work Breakdown Structure (CWBS) documentation may also be required for contractual modifications.

Change Control: Baseline Changes

Contractual changes/modifications are initially incorporated into the Contract Budget Base (CBB), typically as part of Undistributed Budget (UB), immediately after the change is received. These modifications can be either definitized or authorized unpriced work.

Baseline changes may occur as a result of

- ✓ **contractual changes/modifications**
- – **application of undistributed budget**
- – **the use of management reserve**
- – **re-planning**
- – **formal reprogramming**

Definitized Work

Definitized work is incorporated into the PMB within 60 days of definitization.

Authorized Unpriced Work

Authorized Unpriced Work, including cost of money, is entered in UB using the proposal dollars at total cost. It may be maintained in UB until definitized or distributed to the responsible organizations.

Change Control: Undistributed Budget

Undistributed Budget is budget applicable to contract effort that has not yet been identified to specific WBS elements at or below the lowest level of reporting to the customer.

Baseline changes may occur as a result of

- ✓ **contractual changes/modifications**
- ✓ **application of undistributed budget**
- – **the use of management reserve**
- – **re-planning**
- – **formal reprogramming**

Distribution of Undistributed Budget (UB) is authorized by the Program Manager. UB may be established at the time of initial contract award and/or when contract modifications are received.

The distribution of UB must be identified in the Contract Budget Base (CBB) and Undistributed Budget (UB) Log for each authorized contract change/modification. This is a requirement as part of a Change Control Process.

Change Control: Management Reserve

Management Reserve (MR) is an amount of the total contract target cost withheld for management control purposes rather than designated to accomplish specific tasks. Baseline changes caused by a distribution of Management Reserve (MR) are also subject to Change Control.

Baseline changes may occur as a result of

- ✓ **contractual changes/modifications**
- ✓ **application of undistributed budget**
- ✓ **the use of management reserve**
- – **re-planning**
- – **formal reprogramming**

Distribution of Management Reserve (MR) is at the discretion of the Program Manager and is based on a justified request for budget to perform an unidentified scope of work that is within the contract SOW.

Distribution of Management Reserve must be identified in the Contract Budget Base (CBB) and Management Reserve (MR) Log. This is a requirement as part of a Change Control Process.

Change Control: Re-Planning

Baseline changes caused by a re-planning of Work Packages are also subject to Change Control.

Baseline changes may occur as a result of

- ✓ **contractual changes/modifications**
- ✓ **application of undistributed budget**
- ✓ **the use of management reserve**
- ✓ **re-planning**
- – **formal reprogramming**

Re-planning of Work Packages within Control Accounts is sometimes necessary to compensate for internal conditions which affect the planning and scheduling of remaining work. Except for correction of errors and accounting adjustments, no retroactive changes will be made to budgets for completed work.

Re-planning should be accomplished within the constraints of the previously established Control Account schedule and budget.

Change Control: Re-Planning

When more extensive re-planning of future work is necessary and the total Control Account budget must be changed, Management Reserve may be used to increase or decrease the control account budgets.

Baseline changes may occur as a result of

- ✓ **contractual changes/modifications**
- ✓ **application of undistributed budget**
- ✓ **the use of management reserve**
- ✓ **re-planning**
- – **formal reprogramming**

If re-planning requires that work and associated budget be transferred between control accounts, this transfer must also be controlled and documented.

Major internal re-planning/re-baselining may be required when the result of cost, schedule or technical issues have caused the original plan to become unrealistic. The contract target cost remains unchanged. The ground rules for re-baselining the remaining effort are submitted to the procuring agency prior to implementation, and all baseline changes must be documented and tracked.

Change Control: Over Target Baseline (OTB)

Over Target Baseline (OTB)/Formal Reprogramming may arise when contract performance deviates from the plan to such an extent that the original plan no longer serves as a reasonable measurement device. In this case, formal reprogramming to a budget that exceeds the CBB may be necessary.

Baseline changes may occur as a result of

- ✓ **contractual changes/modifications**
- ✓ **application of undistributed budget**
- ✓ **the use of management reserve**
- ✓ **re-planning**
- ✓ **formal reprogramming**

The remaining work and budget should be thoroughly analyzed prior to reprogramming. An overrun contract and overrun projections are not the most important factors in the decision. Changing a baseline merely to compensate for current variances is inappropriate.

The procuring agency must be consulted prior to reprogramming. The change to the budget and schedule are recorded as though the contractual scope had been changed. Changes to the baseline budget are fully documented and traceable per the change control process.

Review Module 7

At this point, you have covered all of the content in Module 7. Take some time now to review the major items:

- The IBR facilitates an understanding of the overall technical, cost, and schedule processes. The Government and Contractor technical counterparts can jointly conduct recurring reviews of PMB planning, status, and Estimates at Completion (EAC) to ensure that baseline integrity is maintained throughout the life of the contract.

Change Control is required to:

- Maintain the integrity of the Performance Measurement Baseline
- Incorporate authorized changes in a timely manner, recording the effects of such changes in budgets and schedules
- Reconcile current budgets to prior budgets in terms of changes to the authorized work and internal re-planning in the detail needed by management for effective control
- Prevent revisions to the program budget except for authorized changes
- Document changes to the Performance Measurement Baseline

Summary of Module 7

If you have a firm grasp of the concepts covered in this module, feel free to progress to the next module. Otherwise, review this module to ensure you have a solid understanding of Integrated Baseline Review (IBR) and Change Control.

This concludes Module 7.