

UNITED STATES OFFICE OF PERSONNEL MANAGEMENT



Information Technology (IT) Baseline Management Policy

Chief Information Officer

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a New Day for Federal Service

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IT Baseline Management Policy

Revision History

Version Number	Version Date	Revision Summary
1.0	May 2011	First Release
2.0	December 2012	Second Release

Executive Summary

This policy provides direction on the development, management and modification of OPM's IT investment baselines. (A **baseline** is a standard against which actual work of an investment is measured. In this policy, actual work is measured in terms of cost and schedule and business-related performance metrics against performance standards.) This policy also provides instructions on status reporting for IT investments. The purpose is to improve Federal IT resource management, accountability, transparency, performance management, and investment oversight.

This policy establishes that status reports provided by the Program Manager to the CIO about the baseline of a program are the Program Manager's official, authoritative reports on investment status. They are the basis on which other decisions about the investment are made, such as funding and other resource decisions. Therefore, this policy establishes that effective baseline planning, management and reporting are closely related to stewardship of Federal resources and protection of the government's interests.

The Chief Information Officer (CIO) and program managers for IT investments are accountable for IT investment planning, funds management, and status reporting. This policy requires program managers to establish Performance Measurement Baselines for their work and to report status to the CIO against the Performance Measurement Baseline. (See Appendix B for the definition of Performance Measurement Baseline.)

This IT Baseline Management Policy supersedes OPM's Earned Value Management Policy, revision 1.3 of June 2007.

The version of this document that is posted to the Web is the official, authoritative version.

1. INTRODUCTION

The ability to successfully develop and manage information technology (IT) is essential to successful program outcomes and the vitality of Federal government services for the American people. If IT investments are not planned well, then cost and schedule overruns occur and expected benefits are jeopardized. When plans change, it's critically important to understand and document the changes and the reasons for them because of the potential mission impact.

This Policy uses several key terms throughout, including the following: baseline, baseline management, Earned Value Management (EVM), Earned Value Management System (EVMS), Performance Measurement Baseline and operational analysis.

A **baseline** is a standard against which actual work of an investment is measured. In this policy, actual work is measured in terms of cost and schedule and business-related performance metrics against performance standards.

A **Performance Measurement Baseline** is the cost, schedule, and technical work scope against which accomplishments will be measured. The Performance Measurement Baseline reflects not only the projected cost and schedule necessary for achieving the technical work scope, but also the business-related performance metrics and results, for which the investment is established. It is prepared for all IT investments and is maintained by the program manager for the investment.

Baseline management is the process for establishing a performance measurement baseline for an IT investment and for managing and reporting any subsequent changes to it. (See Appendix B for the definition of Performance Measurement Baseline.) Baseline management also includes the measure of business outcomes or outputs as compared to a measurable objective.

A **baseline change** requiring CIO approval is any modification to *any* of the following;

- the schedule of an investment at Level 1, 2 or 3 of the work breakdown structure (WBS),
- the cost estimate of the investment at Level 1, 2, or 3 of the work breakdown structure;
- the technical scope of the investment, *or*
- business-related performance metrics of the investment.

A baseline change includes any updates to schedule, cost, technical scope, or business related performance metrics for information displayed on the Federal IT Dashboard for the investment and any updates to budget exhibits including the Exhibit 300 and the Exhibit 53.

EVM is a management technique which uses past performance to predict future cost and schedule performance results.

EVMS is a set of integrated processes and procedures developed in compliance with a standard issued by the American National Standards Institute (ANSI) together with the Electronic Industries Alliance (EIA) (ANSI/EIA-STD-748) to enable the development of reliable data about the cost and schedule status of an investment.

Operational analysis is a method of examining the ongoing performance of an operating asset investment and measuring that performance against an established set of cost, schedule, and performance goals.

See Appendix B (Glossary) for these and other definitions.

1.1 Purpose

The purpose of this IT Baseline Management Policy is to establish responsibility and accountability for planning, management and reporting on Federal IT resources, including funds and personnel. The purpose is to improve Federal IT resource management, accountability, transparency, performance management, and investment oversight. This policy establishes the relationship between effective baseline planning, management and reporting and stewardship of Federal resources.

This Policy establishes roles and responsibilities, and the processes and procedures for which the actual performance against the investment's performance measurement baseline will be measured. (See Appendix B for the definition of Performance Measurement Baseline.)

This Policy also establishes roles and responsibilities, policies and procedures for obtaining approval of performance measurement baselines and any changes to them. (See Appendix B for a definition of baseline change.) It also specifies the list of records that must be developed and maintained by a Program Manager to document the investment's Performance Measurement Baseline. (See Appendix F.)

This policy clarifies the CIO's and Program Managers' responsibilities for IT investment planning, funds management, and status reporting.

This directive implements the Office of Management and Budget (OMB) Memorandum M-10-27, Information Technology Investment Baseline Management Policy, June 28, 2010, and M-11-29, Chief Information Officer (CIO) Authorities, August 8, 2011.

1.2 Scope and Applicability

This policy applies to all OPM information technology investments, regardless of funding type and funding source. It also applies to both government and contractor effort. (That is, Federal employees as well contractors performing work for an OPM investment must implement the requirements of this policy.)

The policy applies to the processes of planning, accounting for, and reporting on funding and other resources planned or used for IT investments. It also applies to processes of accounting for the status of plans for IT investments, and the status of resources used. Therefore, it establishes processes through which the CIO and other Federal government officials obtain information from the Program Manager to make informed decisions about the commitment of government funds and other resources to the management of an IT investment.

This policy, therefore, applies to the processes of baseline management, which are the processes for establishing the performance measurement baseline for an IT investment and for managing and reporting any subsequent changes to them. (See Appendix B for the definitions of “baseline change” and “Performance Measurement Baseline”.)

It applies to all IT investments regardless of contract type that are in development, modernization, or enhancement status. It also applies to investments for which the work is performed by Federal employees. It also applies to investments which have deployed a solution that is operational (also known as steady state investments) and to investments in mixed life cycle status.

This policy applies to the work of the individuals and groups filling the roles described in section 2, “Responsibilities”.

1.3 Compliance, Enforcement, and Exceptions

The Chief Information Officer (CIO) will enforce the IT Baseline Management Policy to ensure compliance through the periodic review of all IT investments within the OPM IT investment portfolio. Deviations and waivers to this policy may only be approved by the CIO.

1.4 Authority

This policy is based on the following authority:

- Office of Management and Budget (OMB) Memorandum M-10-27, Information Technology Baseline Management Policy (June 28, 2010), which requires Federal agencies to establish baseline management policies.
- Office of Management and Budget (OMB) Memorandum M-11-29, Chief Information Officer (CIO) Authorities (August 8, 2011), which establishes the Chief Information Officer authority.
- The Federal Acquisition Regulation (FAR) Earned Value Management clause 48 parts 2, 7, 34, and 52 effective July 6, 2006, which requires the use of an Earned Value Management System for major IT investments.
- The Capital Programming Guide, Supplement to OMB Circular A-11, Part 7, which requires the use of Earned Value Management for investments in development status and the use of operational analysis of steady state investments.
- The Clinger-Cohen Act of 1996, which requires “the head of each executive agency [to] design and implement ... a process for maximizing the value and assessing and managing the risks of the information technology acquisitions of the executive agency” (Clinger-Cohen Act of 1996, Section 5122(a).)

- OMB Circular A-130, Management of Federal Information Resources, which requires the Chief Information Officer to monitor and evaluate the performance of information technology investments through a capital planning and investment control process.

2. ROLES, RESPONSIBILITIES, AND GOVERNANCE

2.1 The Chief Information Officer (CIO)

The CIO responsibilities include:

- Reviewing all performance measurement baselines for an investment. (See Appendix B for the definition of Performance Measurement Baseline.)
- Approving new baselines for IT investments and changes to the baselines. (See Appendix B for the definition of baseline change.)
- Consulting with the Chief Financial Officer (CFO) on funding amounts for IT investments, including changes to Exhibit 300 and Exhibit 53 funding amounts for IT investments,
- Identifying and assessing differences between investment plans, documented in a baseline, and actual performance
- Providing information to the Director, OPM, about the status of investments
- Evaluating the effectiveness of a program manager's policies and procedures for developing and managing an investment's baseline
- Evaluating a program manager's effectiveness in evaluating baseline status and reporting on it
- Participating with the Director and CFO in agency resource management decisions for IT investments, based, in part, on baseline management information about the investments
- Chairing the OPM Investment Review Board (IRB)
- Advising the agency head on the selection, management and use of information technology, and on risks related to managing them
- Advising the agency head on budgetary implications of information technology decisions and consulting with the CFO about the implications
- Advising the agency head on whether to continue, modify or terminate an IT investment
- Deciding which baseline management type is required for a specific IT investment (i.e., Earned Value Management, operational analysis or both)
- Deciding, for investments using Earned Value Management, which baseline management activities apply (i.e., Integrated Baseline Reviews (IBRs), formal surveillance and audits, or all such activities)
- Deciding whether to remove an investment that is required to use Earned Value Management, from the use of it
- Making documentation about a contractor's compliance with ANSI/EIA-STD 748 available to OMB upon request
- Establishing and updating this policy

The CIO is jointly responsible with an investment's Executive Sponsor for an investment's success.

2.2 Executive Sponsor

A senior executive who is responsible for:

- Establishing the business need for the investment
- Preparing and defending the budget request for the investment
- Obtaining CIO approval of funding and staff for the investment
- Reviewing the performance measurement baseline with the program manager. (See Appendix B for the definition of Performance Measurement Baseline.)
- Understanding key cost projections and milestones projected in the performance measurement baseline
- Knowing the status of the investment against its cost and schedule projections

The Executive Sponsor also plays a significant role in establishing the business-related performance metrics for the investment and is responsible for:

- Working with the agency head and other executives to establish the business need and objectives of the investment
- Establishing the business goals of the investment
- Establishing the business-related performance metrics to be used in evaluating the investment's success
- Reviewing and validating the Performance Measurement Baseline for the investment and any changes to any components of it, including cost, schedule, technical work scope and business related performance metrics of the investment

When the Executive Sponsor is the supervisor of the Program Manager for the investment, the Executive Sponsor is responsible for:

- Consulting with the CIO in the selection of the program manager
- Obtaining information from the CIO on his or her assessment of the work performance of the program manager.

The Executive Sponsor is jointly responsible with the CIO for the investment's success.

2.3 IT Investment Management

IT Investment Management is a component within the Office of the CIO. The component:

- Prepares and maintains policies and procedures related to IT capital planning, including the agency's IT Baseline Management Policy
- Supports executive level governance related to the management of OPM's IT investments.
 - Serves as secretariat to the agency's Investment Review Board (IRB)
- Develops and leads agency wide implementation of policies and procedures for:
 - IT capital planning and investment control (CPIC)
 - Earned Value Management (EVM)
 - Operational analysis

- OPM's system development life cycle standard, IT Systems Manager (ITSM)
- Performance reviews of the agency's IT investments.
- Provides independent assessments of OPM's IT investments to the CIO and other senior executives.
- Manages OPM's participation in the Federal IT Dashboard and submission of IT investment status information to it.
- Advises managers of IT investments on the development of budget exhibits for the investments and provides information about change request processes covered by this policy.
- Advises the CIO on status and trends in baseline-related information, such as cost, schedule, technical work scope and business-related performance metrics of the investment.
- Evaluates trends in IT spending and, with OPM's Enterprise Architect, performs IT investment planning and analysis.
- Develops and administers operational analysis guidance for OPM IT investments.
- Evaluates proposed new and revised IT investment performance measurement baselines and recommends their approval or disapproval to the CIO. (See Appendix B for the definition of Performance Measurement Baseline.)
- Advises the CIO and OPM contracting officers on technical content of contract clauses related to this policy.

2.3.1 Earned Value Management Program Management Office

The Earned Value Management Program Management Office (EVM PMO) is a component of IT Investment Management in the Office of the CIO. The EVM PMO:

- Drafts EVM policies for review and approval
- Leads the agency's Earned Value Management System (EVMS) by developing and managing processes and procedures for the agency's Earned Value Management program and overseeing the development of reliable EVM statistics about the cost and schedule status of OPM IT investments
- Provides independent advice to the CIO on the status of IT investments that use EVM
- Provides guidance and support to OPM executives and Program Management Offices in understanding and interpreting Earned Value Management data
- Advises Program Managers in effective application of EVM processes and principles
- Evaluates proposed new and revised performance measurement baselines for IT investments that use Earned Value Management and recommends their approval or disapproval. (See Appendix B for the definition of Performance Measurement Baseline.)
- Manages the agency's toolset for Earned Value Management
- Receives and evaluates monthly Earned Value Management data about investments from program managers
- Reviews requests to remove IT investments from the use of Earned Value Management and advises the CIO on a decision.

2.3.2 Capital Planning and Investment Control Program Management Office

- Coordinates the development, update and submission of OPM budget exhibits for information technology, such as the Exhibit 53 and the Exhibit 300s
- Manages the agency's toolset for Capital Planning and Investment Control.
- Prepares standard operating procedures for the use of such tools, publishes them, and provides training in their use.
- Reviews and analyzes OPM content for reporting to the Federal IT Dashboard. Prepares summaries of findings and advises the CIO of findings.
- Works with OMB officials to diagnose problems in the submission of OPM content to the Federal IT Dashboard and works with such officials to take corrective action.
- Leads a monthly IT Dashboard self-assessment process for the agency's IT investments. Makes recommendations to the CIO for his monthly assessments of investments.
- Supports program offices in the update of their investment information in the OMB IT Dashboard as requested.
- Evaluates proposed new and revised performance measurement baselines for all IT investments and recommends their approval or disapproval. (See Appendix B for the definition of Performance Measurement Baseline.)
- Develops policies and procedures, and standard operating procedures for IT capital planning-related topics, as needed.

2.4 IT Executive Governance Groups

IT executive governance groups oversee the agency's use of information technology.

- **Investment Review Board (IRB).** The Investment Review Board reviews and recommends investment priorities to the Director, Office of Personnel Management, for all information technology spending of OPM. For more detail on the roles and responsibilities of the IRB, see the IRB charter available internally within the OPM firewall on THEO at [Investment Review Board - Charter](#). For external users, a copy of the Investment Review Board – Charter may be requested from the Office of the Chief Information Officer.
- **Executive Steering Committees.** Executive Steering Committees (ESC) provide direct oversight of information technology investments.

2.5 Program Managers

OPM Program Managers are responsible for:

- Developing a cost estimate for the investment using the Government Accountability Office (GAO) Cost Estimating and Assessment Guide, March 2009, and updating the estimate whenever it changes. Use of the GAO Cost Estimating and Assessment Guide is required by the OPM Cost Estimating and Assessment Policy. See Appendix C for links to the GAO Cost Estimating and Assessment Guide and the OPM Cost Estimating and Assessment Policy.
- Preparing and maintaining the Performance Measurement Baseline for their IT investment. (See Appendix B for the definition of Performance Measurement Baseline.)

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- Developing policies and procedures for the development and management of the Performance Measurement Baseline for that investment
- Ensuring that such policies and procedures are consistent with this policy and other guidance issued by the Chief Information Officer
- Developing and recording memorandums of understanding (MOUs) or similar agreements with OPM and other government organizations describing the support required from those organizations
- Ensuring the accuracy and integrity of baseline status information delivered to the Chief Information Officer, IT Investment Management, and the Earned Value Management (EVM) Program Management Office (PMO)
- Reporting performance against the Performance Measurement Baseline to IT Investment Management and the EVM PMO by the due dates specified in Paragraph 6.3 of this Policy. (See Appendix B for the definition of Performance Measurement Baseline.)
- Drafting budget exhibits for the investment, including the Exhibit 300 and line items for the Exhibit 53
- Submitting all initial and revised performance measurement baselines to the CIO for approval, including updates to Exhibit 300 and Exhibit 53 information for the investment. (See Appendix B for the definitions of “baseline change” and “Performance Measurement Baseline.”)
- Recommending to the CIO which baseline management type should apply to the investment they manage (Earned Value Management, operational analysis or both)
- Implementing the CIO’s decision on the baseline management type
- Implementing the agency’s Earned Value Management System (EVMS) and performing operational analysis as applicable, in accordance with OPM policy
- Implementing the CIO’s decisions to implement specific baseline management activities for investments using Earned Value Management (Integrated Baseline Reviews (IBRs), formal surveillance and audits, or all such activities)
- Overseeing Control Account Managers for investments requiring Earned Value Management (EVM)
- Developing the investment’s Work Breakdown Structure for planning purposes
- Developing the investment’s Organizational Breakdown Structure for planning purposes
- Developing the investment’s Responsibility Assignment Matrix for planning purposes
- Developing, maintaining and ensuring the accuracy of the investment’s Master Budget Log when the use of Earned Value Management (EVM) is required
- Ensuring that all records of an investment’s Performance Measurement Baseline are consistent with each other, regardless of the tool in which they are stored. (See Appendix B for the definition of Performance Measurement Baseline. See Appendix F for the list of records that must be maintained for the Performance Measurement Baseline.)
- Ensuring that all records that must be maintained for the Performance Measurement Baseline are consistent with each other, and readily accessible to the program manager, members of the program management office, the CIO, the CIO’s reviewers, auditors and outside officials when requested. (For a list of the records that must be maintained and must be consistent with each other, see Appendix F.)
- Preparing the investment’s statements of objectives and statements of work

- Developing business related performance metrics for the investment, in consultation with the executive sponsor for the investment
- Developing and approving summary Earned Value or operational analysis reports depending on investment type in accordance with this policy and submitting them to the CIO for review
- Developing cost and schedule and business-related performance metric forecasts for the investment
- Preparing and submitting baseline change requests in accordance with this policy
- Monitoring the Performance Measurement Baseline for the investment and updating the Federal IT Dashboard with current status. (See Appendix B for the definition of Performance Measurement Baseline.)
- Responding to CIO questions about the investment, including questions related to in-depth reviews of the investment
- Developing and maintaining the investment risk management plan and risk register
- Providing information to the CIO on the baseline management practices of the program.

2.6 Program Management Offices

The Program Management Office for a specific investment is responsible for supporting the Program Manager at his or her request in:

- Developing the investment's Work Breakdown Structure
- Developing the investment's Organizational Breakdown Structure
- Developing the investment's Responsibility Assignment Matrix
- Developing the investment's Master Budget Log when the use of Earned Value Management (EVM) is required
- Developing and maintaining the investment's Master Schedule Log
- Developing and maintaining the investment's Performance Measurement Baseline. (See Appendix B for the definition of Performance Measurement Baseline.)
- Ensuring that all records of an investment's Performance Measurement Baseline are consistent with each other, regardless of the tool in which they are stored. (See Appendix B for the definition of Performance Measurement Baseline.)
- Performing operational analysis for the investment
- Developing summary Earned Value or operational analysis reports
- Providing analytical support to the program manager in response to CIO questions about the investment.

2.7 Control Account Managers

The Control Account Managers are typically only assigned on information technology investments which require the use of EVM. They report to a program manager and are responsible for:

- Executing and controlling the performance measurement baseline for their assigned Control Accounts. (See Appendix B for the definition of Performance Measurement Baseline.)

- Conducting variance analyses and developing corrective action plans to address cost and schedule performance of the Control Accounts
- Developing the cost and schedule Estimate At Completion (EAC) for the control accounts under their responsibility
- Advising the program manager on the cost and schedule status of control accounts for which they are responsible
- Advising the program manager on the development of comprehensive cost and schedule forecasts for their assigned Control Accounts.

2.8 OPM Contracting Officers

OPM contracting officers are responsible for consulting with the CIO on the development of contract clauses for investments covered by this policy to ensure that the clauses reflect the requirements of this policy. See sections 6.1 and 6.2 for more information regarding the use of contract clauses.

They are also responsible for requesting appropriate documentation from contractors related to validating compliance with this policy.

2.9 Chief Financial Officer (CFO)

- Consults with the CIO on the establishment of cost baselines for OPM's IT investments and changes to them.
- Reviews OPM's Exhibit's 53 and 300 for consistency with the agency's budget plans and budget request, including the initial Exhibit's 53 and 300 and any changes to them.

3. OPM POLICY: THRESHOLDS FOR BASELINE MANAGEMENT

It is OPM policy to develop cost and schedule estimates for IT investments and manage investment baselines by implementing the Government Accountability Office (GAO) Cost Estimating and Assessment Guide. See Appendix C for links to the GAO Cost Estimating and Assessment Guide and OPM's Cost Estimating and Assessment Policy.

It is also OPM policy to apply thresholds when determining baseline management requirements. EVM is to be applied to OPM major IT investments with total project cost greater than \$5 million of Development, Modernization & Enhancement (DM&E) funding from inception to completion.

3.1 OPM's Definition of a Major IT Investment

OPM has defined a major IT investment as one that:

- Is managed by an OPM project manager AND
 - is for financial management and obligates more than \$500,000 annually; OR

- the Exhibit 53 shows more than \$30 million in development, modernization and enhancement (DME), steady state or both types of funds over a 3-year period for the investment; OR
- the investment requires special OPM management attention because:
 - the nature of the investment is complex, AND
 - the investment is important to an OPM policy or program, AND
 - the investment is a high priority of the OPM Director, the President, Congress or OMB.

An investment may be designated major by the Chief Information Officer, the Investment Review Board (IRB), or Office of Management and Budget, regardless of the factors listed above.

3.2 Selecting EVM When it is Not Required

Although EVM is not required for projects with estimated costs of less than \$5.0M of Development, Modernization & Enhancement (DM&E) funding, the option exists for the CIO to decide that a project must implement EVM. The option also exists for OPM Program Managers and executives to request the CIO to decide to include certain projects in EVM. The application of Earned Value Management to such projects should be carefully evaluated. If the CIO agrees that EVM should be applied to such an investment, only the minimum amount of performance data required for management control during the life of the investment should be collected and analyzed.

3.3 Program Planning When EVM is Not Required

When EVM is not required, such as for investments in steady state operations and those in development, modernization and enhancement that do not meet the thresholds outlined above, the program manager shall, nonetheless, perform certain fundamental planning and analysis activities. At a minimum, the program manager must:

- Plan all work scope for the program to completion
- Break down the program work scope into finite pieces that can be assigned to a responsible person or organization
- Ensure that the finite pieces are clearly defined in terms of technical, schedule and cost objectives
- Integrate program cost, schedule, technical, and business-related performance measures into a performance measurement baseline against which accomplishments may be measured and changes controlled. (See Appendix B for the definition of Performance Measurement Baseline.)
- Use actual cost incurred and recorded in accomplishing the work performed
- Objectively assess accomplishments at the work performance level
- Analyze significant variances from the plan, forecast impacts, develop corrective actions, and prepare an estimated cost at completion for those investments in development, modernization and enhancement based on performance to date and work to be performed.

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Operational analysis shall be conducted on all steady state IT investments regardless of contract type or value. See Appendix B for the definition of a steady state investment.

3.4 Selecting Baseline Management Types (EVM or Operational Analysis)

Table 3-1 identifies the types of baseline management that may be applied to an investment (EVM or operational analysis) and the dollar thresholds and project types to which baseline management types shall be applied. As noted above, the OPM CIO, in consultation with the EVM Program Manager and the investment's Program Manager, evaluates an IT investment and decides which type of baseline management will apply to the investment. The CIO also decides, for those investments using EVM, which specific baseline management activities apply (IBR, surveillance reviews or audits.)

The process for developing and establishing the baseline itself, for investments using Earned Value Management, can be found in OPM's Earned Value Management System Description (EVMSD) which is available through the Office of the Chief Information Officer, IT Investment Management unit.

Table 3-1. Thresholds for Application of Baseline Management Types and Activities

		BASELINE MANAGEMENT TYPES		BASELINE MANAGEMENT ACTIVITIES FOR INVESTMENTS USING EARNED VALUE MANAGEMENT	
PROJECT TOTAL ESTIMATED COST (FROM INCEPTION TO COMPLETION)	INVESTMENT TYPE	EARNED VALUE MANAGEMENT (EVM)	OPERATIONAL ANALYSIS	INTEGRATED BASELINE REVIEW (IBR)	FORMAL SURVEILLANCE & AUDITS
\$20.0M and over	Development, Modernization & Enhancement	Required	Not Applicable	Required	Required
\$5.0M to \$19.9M	Development, Modernization & Enhancement	Required	Not Applicable	Required	Optional
\$0.0M to \$4.9M	Development, Modernization & Enhancement	Optional	Not Applicable	Optional	Optional
\$0.0M and over	Steady State	Not Applicable	Required	Not Applicable	Not Applicable

Factors to consider when applying the thresholds outlined above include:

- Nature of the work. Some projects may be at or above the dollar threshold, but the nature of the scope of work may not be conducive to EVM. For example, it is unlikely that the OPM will achieve meaningful performance data on staff augmentation projects that are exclusively Level of Effort (LOE).
- Criticality to OPM mission, mandates, and strategic goals

- Complexity of the work effort
- Criticality of the schedule to the project or other projects
- Nature of the effort (e.g., whether the effort is new, high risk, etc. New system and software development should be considered high-risk.)
- Project and subcontract strategy (e.g., will the project require major subcontracted effort?)

Thresholds are in current year constant dollars and refer to estimated cost from inception to completion, including options.

3.5 Removing the Requirement for the use of EVM on an Investment

The CIO will determine which investments are to be removed (and when) from the EVM portfolio. The CIO will consider information provided by the agency's EVM PMO, the Program Manager, and others in making the final determination.

To request removal from the agency's Earned Value Management portfolio, the program manager or executive sponsor must submit a memorandum to the CIO, which includes the following information:

- Investment Name
- Nature of the request
- Reason for the request
- Type and amount of funding currently in use and projected for the investment (Development/Modernization/Enhancement, Steady State, or Mixed Life Cycle.)
- Analysis of the investment in relation to each factor listed in Section 3.4, above (i.e., nature of the work, criticality of the investment, complexity of the work effort, criticality of the schedule, nature of the effort, and project and contract strategy.)

The CIO will review the request and make a decision.

3.6 Migrating Investments Using EVM to Operations and Maintenance or Terminating Them

Major IT investments requiring the use of EVM may be migrated to Operations and Maintenance (O&M) or terminated. (A program may be terminated for such reasons as completion of the investment, budgetary constraints, etc.) When an investment is terminated, the investment manager must complete project termination requirements of the agency's System Development Life Cycle (SDLC) and inform the CIO.

The investment will then be removed from the agency's EVMS portfolio. When an investment enters O&M status (also known as "steady state"), the investment will follow the instructions in this policy for Steady State IT Investment baseline management to report investment performance against the cost, schedule, technical, and business-related performance measures for the Investment. See Section 4.1, Steady State IT Investment Baseline Management, of this Policy for instructions on baseline management for programs in Operations and Maintenance.

4. OPM POLICY: IT INVESTMENT BASELINE MANAGEMENT

It is OPM policy to apply baseline management to all OPM IT investments in order to provide executives and stakeholders with accurate data about investment cost, schedule, technical work scope, and business related performance metrics from which to make effective management decisions. The investment performance measurement baseline must reflect the cost, schedule, and technical work scope necessary to achieve the business-related performance metrics for the investment.

It is OPM policy that updates to budget exhibits for the investment (including the Exhibit 300 and Exhibit 53 line items) and the Federal IT Dashboard reflect the performance measurement baseline for the investment.

It is also OPM policy that updates to budget exhibits for the investment be approved by the CIO through the Baseline Change Request process described below. (See the following paragraphs and Section 5 for information on establishing and revising investment baselines. See Appendix B for the definition of Performance Measurement Baseline.)

4.1 Steady State IT Investment Baseline Management

Steady State IT Investments are those investments which have deployed a solution that is operational and only requires continued Operation & Maintenance (O&M).

As noted above, program managers for steady state IT investments, like all others, must establish a performance measurement baseline for their investment, including cost, schedule, and technical work scope for achieving the business-related performance metrics established for the investment. (See Appendix B for the definition of Performance Measurement Baseline.)

4.1.1 Establishing a Steady State IT Investment Baseline

The Program Manager must use the Baseline Change Request (BCR) form (Appendix D) when requesting approval from the CIO to establish a performance measurement for any Steady State investment covered by this policy. (See Appendix B for the definition of Performance Measurement Baseline.) The Program Manager must review the BCR form using the IT Baseline Self-Assessment Checklist (Appendix E) before submitting the BCR to the CIO for approval.

The Baseline Change Request shall include:

- Description of the business need for the proposed performance measurement baseline. (See Appendix B for the definition of Performance Measurement Baseline.)
- List of the key performance measures to be used and the performance indicators and performance targets for those measures. (See Appendix B for the definitions of key performance measure, performance indicator, and performance target.)
- A cost estimate for the investment developed using the Government Accountability Office (GAO) Cost Estimating and Assessment Guide which is required by the OPM Cost Estimating and Assessment Policy. See Appendix C (References) for links to the GAO Cost Estimating and Assessment Guide and the OPM Cost Estimating and Assessment Policy.
- Master Schedule Log establishing a product oriented work breakdown structure for the investment
- The planned start and end dates for the activities in the proposed performance measurement baseline. (See Appendix B for the definition of Performance Measurement Baseline.)
- Risk management plan and risk register.

4.1.2 Validating a Steady State IT Investment Baseline

Steady state investments by nature are low technical risk investments. The program manager for a steady state investment that meets the definition of “major” must document the cost and schedule and business-related performance metric baseline for the investment in the OMB Circular A-11, Section 300, Exhibit 300 budget request for the investment. The IT Investment Management unit must review the proposed baseline and advise the program manager on the type of specialized resources that are essential for validating it.

4.1.3 Revising a Steady State IT Investment Baseline

Steady State IT Investment’s scope and cost objectives can change and should be expected. Acceptable reasons for revising a Steady State IT Investment baseline include:

- Significant change in investment objectives resulting from internal or external management decisions, changes in funding levels or availability of funds (e.g. extended continuing resolution), or contracting concerns (including contractual protests).
- A condition in which the current baseline is no longer useful as a management tool and loses its meaning.

The program manager is responsible for maintaining traceability among all Performance Measurement Baseline artifacts, including monthly reports. To do so, the program manager must always maintain the historical work breakdown structure and schedule activities of the investment. **The WBS items, including activity names and numbers, must never be changed or deleted once the CIO has approved the Performance Measurement Baseline.** (See Appendix B for the definition of Performance Measurement Baseline.)

In the case when the WBS structure and activity names and numbers are no longer reflective of current work scope, the program manager must close them and create a new WBS item and activity as applicable.

The Program Manager must use the Baseline Change Request (BCR) template when requesting the CIO to approve changes to an established Steady State IT Investment baseline. (See Appendix D.) The Program Manager must review the BCR template using the IT Baseline Self-Assessment Checklist (Appendix E) before submitting the BCR to the CIO for approval.

The Baseline Change Request shall include:

- Brief summary of the baseline change request and the reasons for the change
- A description of implications to the investment if the request is approved
- Description of changes to changes to the key performance measures, their performance indicators or targets. (See Appendix B for definitions.)
- Summary of changes in the investment's scope and/or capabilities
- Identification of contributing problems
- Explanation of why the current plan is not feasible
- Remediation plans to prevent problem recurrence, if applicable
- Description of any contract implications or necessary actions assuring that the baseline accurately reflects contracting constraints and risks
- A cost estimate detailing the variance from the most recently approved Performance Measurement Baseline for the investment. The updated estimate must be developed for the activities in the proposed Performance Measurement Baseline using the Government Accountability Office (GAO) Cost Estimating and Assessment Guide. (As noted above, use of the GAO Cost Estimating and Assessment Guide is required by the OPM Cost Estimating and Assessment Policy. See Appendix C for links to the GAO Cost Estimating and Assessment Guide and the OPM Cost Estimating and Assessment Policy.)
- Master Schedule Log providing chronology of changes to the investments work breakdown structure and variance from the most recently approved performance measurement baseline. (See Appendix B for the definition of Performance Measurement Baseline.)
- Updated risk management plan and risk register.

4.2 Mixed Lifecycle IT Investment Baseline Management

Mixed Lifecycle IT Investments are those investments which have a combination of both Steady State and DM&E related activities.

4.2.1 Establishing a Mixed Lifecycle IT Investment Baseline

The Program Manager must use the Baseline Change Request (BCR) template requesting approval from the CIO to establish a performance measurement baseline for any Mixed Lifecycle IT Investment covered by this policy. (See Appendix B for the definition of

Performance Measurement Baseline. See also Appendix D.) The Program Manager must review the BCR template using the IT Baseline Self-Assessment Checklist (Appendix E) before submitting the BCR to the CIO for approval.

The Baseline Change Request shall include:

- Description of the business need for the proposed baseline
- List of the key performance measures to be used
- List of the performance indicators and performance targets for the key performance measures. (See Appendix B for definitions.)
- An Integrated Master Schedule utilizing a product oriented Work Breakdown Structure (WBS)
- A cost estimate for the investment developed using the Government Accountability Office (GAO) Cost Estimating and Assessment Guide which is required by the OPM Cost Estimating and Assessment Policy. See Appendix C (References) for links to the GAO Cost Estimating and Assessment Guide and the OPM Cost Estimating and Assessment Policy. Master Schedule Log establishing a product oriented work breakdown structure for the investment.
- Master Budget Log providing traceability of cost at the Control Account level if the use of EVM is required for the DM&E related activities.
- Risk management plan and risk register.

4.2.2 Validating a Mixed Lifecycle IT Investment Baseline

Mixed Lifecycle Investments may be high risk investments due to ongoing development efforts. They may also be required to perform EVM on the DM&E related activities. See Table 3.1 for when the use of EVM is required and Section 4.3 for specific baseline management requirements related to DM&E activities. The IT Investment Management unit must review the proposed baseline and advise the program manager on the type of specialized resources essential for validating it.

4.2.3 Revising a Mixed Lifecycle IT Investment Baseline

Through the lifecycle of a Mixed Lifecycle IT Investment the program scope and cost objectives can change as previous unknowns are defined or as other circumstances dictate. Such revisions should be expected. Acceptable reasons for revising a Mixed Lifecycle IT Investment baseline include:

- Significant change in investment goals, scope, requirements, or objectives resulting from internal or external management decisions, changes in funding levels or availability of funds (e.g. extended continuing resolution), or contracting concerns (including contractual protests).
- The evolution of scope and objectives of an investment due to the use of an incremental or iterative system development and planning lifecycle. The use of such a lifecycle may result in a progressive elaboration of investment scope and objectives when transitioning from one iteration or increment to the next.

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- A condition in which the current baseline is no longer useful as a management tool for realistic performance measurement because variances are so high that they lose meaning.

The program manager is responsible for maintaining traceability among all Performance Measurement Baseline artifacts, including monthly reports. To do so, the program manager must always maintain the historical work breakdown structure and schedule activities of the investment. **The WBS items, including activity names and numbers, must never be changed or deleted once the CIO has approved the Performance Measurement Baseline.** (See Appendix B for the definition of Performance Measurement Baseline.)

In the case when the WBS structure and activity names and numbers are no longer reflective of current work scope, the program manager must close them and create a new WBS item and activity as applicable.

The Program Manager must use the Baseline Change Request (BCR) form (Appendix D) when requesting the CIO to approve changes to an established Mixed Lifecycle IT Investment performance measurement baseline. (See Appendix B for the Definition of Performance Measurement Baseline.) The Program Manager must review the BCR form using the IT Baseline Self-Assessment Checklist (Appendix E) before submitting the BCR to the CIO for approval.

The Baseline Change Request shall include:

- Brief summary of the baseline change request and the reasons for the change
- A description of implications to the investment if the request is approved. Description of changes to the key performance measures, their performance indicators or targets. (See Appendix B for definitions.)
- Summary of changes in the investment's scope and/or capabilities.
- Identification of contributing problems, why the current plan is not feasible, and remediation plans to prevent problem recurrence, if applicable. Description of any contract implications or necessary actions assuring that the baseline accurately reflects contracting constraints and risks.
- Master Schedule Log providing chronology of changes to the investments work breakdown structure and variance from the most recently approved performance measurement baseline. (See Appendix B for the Definition of Performance Measurement Baseline.)
- A cost estimate detailing the variance from the most recently approved Performance Measurement Baseline for the investment. The updated estimate must be developed for the activities in the proposed Performance Measurement Baseline using the Government Accountability Office (GAO) Cost Estimating and Assessment Guide. (As noted above, use of the GAO Cost Estimating and Assessment Guide is required by the OPM Cost Estimating and Assessment Policy. See Appendix C for links to the GAO Cost Estimating and Assessment Guide and the OPM Cost Estimating and Assessment Policy.)
- Master Budget Log providing traceability of any changes effecting cost at the Control Account level if the use of EVM is required for the DM&E related activities.

- Updated risk management plan and risk register.

4.3 Development, Modernization and Enhancement (DM&E) IT Investment Baseline Management

IT Investments which are developing a new solution or performing modernization and enhancements to existing solutions are called DM&E IT Investments and are by nature high risk investments.

4.3.1 Establishing a DM&E IT Investment Baseline

When establishing a performance measurement baseline for a DM&E IT investment, an auditable trail must be established in the form of a Baseline Change Request (BCR) and Master Schedule Log (MSL) for all IT Investments covered by this policy as well as a Master Budget Log (MBL) for DM&E IT Investments requiring the use of Earned Value Management. (See Appendix B for the definition of Performance Measurement Baseline.) See Table 3.1 for when the use of EVM is required. Templates and necessary guidance for these artifacts can be found in the Earned Value Management System Description (EVMSD). (For more information, see Appendix C, Section C.2.2.)

The Program Manager must use the Baseline Change Request (BCR) form (Appendix D) when requesting approval from the CIO to establish a baseline for any DM&E IT Investment covered by this policy. The Program Manager must review the BCR form using the IT Baseline Self-Assessment Checklist (Appendix E) before submitting the BCR to the CIO for approval.

The Baseline Change Request shall include:

- Description of the business need for the proposed baseline
- List of the key performance measures to be used
- List of the performance indicators and performance targets for the key performance measures. (See Appendix B for definitions.)
- An Integrated Master Schedule which employs a product oriented Work Breakdown Structure (WBS)
- A cost estimate for the investment developed using the Government Accountability Office (GAO) Cost Estimating and Assessment Guide which is required by the OPM Cost Estimating and Assessment Policy. See Appendix C (References) for links to the GAO Cost Estimating and Assessment Guide and the OPM Cost Estimating and Assessment Policy.
- Master Schedule Log establishing a product oriented work breakdown structure for the investment. Master Schedule Log establishing a product oriented work breakdown structure for the investment
- Master Budget Log providing traceability of cost at the Control Account level if the use of EVM is required.
- Risk management plan and risk register.

4.3.2 Validating a DM&E IT Investment Baseline

Major IT investments for which the use of Earned Value Management is mandatory (see Table 3-1 above) are required to conduct Integrated Baseline Reviews (IBRs) within 90 days of establishing the cost, schedule, and technical baselines for IT projects with a duration of 18 months or less and within 180 days for projects with a duration greater than 18 months. Periodic Integrated Baseline Reviews shall be conducted if program risk dictates or when major scope or cost objectives have changed. The CIO will decide whether Periodic Integrated Baseline Reviews shall be conducted.

If the use of Earned Value Management has been adopted when it is not mandatory (see Table 3-1 above), the CIO will decide whether an Integrated Baseline Review must be conducted on the investment.

Specific guidance and criteria for conducting Integrated Baseline Reviews can be found in OPM's Integrated Baseline Review Guide, which is available through the Earned Value Management Program Management Office in the IT Investment Management unit.

When the use of EVM is not required, the IT Investment Management unit must review the proposed baseline and advise the program manager on the type of specialized resources essential for validating it.

4.3.3 Revising a DM&E IT Investment Baseline

Through the lifecycle of a DM&E IT Investment the program scope and cost objectives can change as previous unknowns are defined or as other circumstances dictate. Such revisions should be expected. Acceptable reasons for revising a DM&E IT Investment baseline include:

- Significant change in investment goals, scope, requirements, or objectives resulting from internal or external management decisions, changes in funding levels or availability of funds (e.g. extended continuing resolution), or contracting concerns (including contractual protests).
- The evolution of scope and objectives of an investment due to the use of an incremental or iterative (i.e., Agile, etc.) system development and planning lifecycle. The use of such a lifecycle may result in progressive elaboration of investment scope and objectives when transitioning from one iteration or increment to the next.
- A condition in which the current baseline is no longer useful as a management tool for realistic performance measurement because variances are so high that they lose meaning.

The program manager is responsible for maintaining traceability among all Performance Measurement Baseline artifacts, including monthly reports. To do so, the program manager must always maintain the historical work breakdown structure and schedule activities of the investment. **The WBS items, including activity names and numbers, must never be changed or deleted once the CIO has approved the Performance Measurement Baseline.** (See Appendix B for the definition of Performance Measurement Baseline.)

In the case when the WBS structure and activity names and numbers are no longer reflective of current work scope, the program manager must close them and create a new WBS item and activity as applicable.

The Program Manager must use the Baseline Change Request (BCR) form (Appendix D) when requesting the CIO to approve changes to an established DM&E IT Investment baseline. The Program Manager must review the BCR form using the IT Baseline Self-Assessment Checklist (Appendix E) before submitting the BCR to the CIO for approval.

The Baseline Change Request shall include:

- Description of changes to the key performance measures, their performance indicators or targets. (See Appendix B for definitions.)
- Summary of changes in the investment's scope and/or capabilities.
- Identification of contributing problems, why the current plan is not feasible, and remediation plans to prevent problem recurrence, if applicable.
- Description of any contract implications or necessary actions assuring that the baseline accurately reflects contracting constraints and risks.
- Master Schedule Log providing chronology of changes to the investments work breakdown structure and variance from the most recently approved performance measurement baseline. (See Appendix B for the Definition of Performance Measurement Baseline.)
- A cost estimate detailing the variance from the most recently approved Performance Measurement Baseline for the investment. The updated estimate must be developed for the activities in the proposed Performance Measurement Baseline using the Government Accountability Office (GAO) Cost Estimating and Assessment Guide. (As noted above, use of the GAO Cost Estimating and Assessment Guide is required by the OPM Cost Estimating and Assessment Policy. See Appendix C for links to the GAO Cost Estimating and Assessment Guide and the OPM Cost Estimating and Assessment Policy.)
- Master Budget Log providing traceability of any changes effecting cost at the Control Account level if the use of EVM is required for the DM&E related activities.
- Updated risk management plan and risk register.

5. NOTIFYING OMB OF A NEW OR REVISED IT INVESTMENT BASELINE

5.1 Obtaining CIO Approval Before Updating Federal IT Dashboard or Budget Exhibits

The program manager for the investment must request and obtain CIO approval for any updates to budget exhibits for changes to cost, schedule, technical work scope, or business-related performance metrics for the investment. Such updates include those made to the Federal IT Dashboard. The program manager must request such changes through the Baseline Change Request process described in Section 4, above. The CIO will coordinate reviews of funding updates with the Chief Financial Officer (CFO) as part of the approval process.

5.2 Notifying OMB

Upon CIO approval of a new baseline or revision to an existing baseline, the investment's program manager must update the Federal IT Dashboard to level 3 of the investment's work breakdown structure (WBS) within 30 days. The following must be included in the update:

- Date of approval of the new or revised performance measurement baseline. (See Appendix B for the definition of Performance Measurement Baseline.)
- Cost and schedule information at Level 3 of the WBS in no greater than six month durations
- Selection of the reason for the change to the existing performance measurement baseline, and brief summary of the rationale used for the rebaselining event, including changes to scope or capabilities. (See Appendix B for the definition of Performance Measurement Baseline.)
- Any additions, modifications, or deletions of key performance measures, performance indicators, or performance targets, as appropriate.

The update to the IT Dashboard will be considered notification to OMB.

6. OPM POLICY: USE OF A PERFORMANCE MANAGEMENT SYSTEM FOR MONITORING INVESTMENT BASELINES

It is OPM policy to use a performance management system, such as EVMS, for both government and contractor efforts, regardless of contract type. The Performance Management System shall create the data necessary to populate the IT Dashboard cost and schedule tables on a monthly basis.

6.1 Contract Clauses for Earned Value Management

OPM government employees and contractors must implement Earned Value Management techniques compliant with ANSI/EIA-STD-748 (Earned Value Management).

Contracts for such investments must include clauses that require:

- (1) the use of EVMS per FAR clause 52.234-4
- (2) the preparation and submission of project management documentation compliant with ANSI/EIA-STD-748,
- (3) the submission of Earned Value data and documentation to the government certifying compliance of the contractor's EVMS with ANSI/EIA-STD 748 within 5 business days, upon request by the Contracting Officer, the Contracting Officer's Representative, the OPM program manager for the contract, or the CIO
- (4) the contractor to submit earned value data for the preceding month to the cognizant investment Program Management Office by the tenth work day of each month. When actual cost is not available, the use of an accrual method shall be employed to report actual cost. The EVM PMO in the IT Investment Management unit will process EVM data by the fifteenth work day of the month.

6.1.1 Providing Documentation to OMB about a Contractor's Compliance with ANSI/EIA-STD-748 (Earned Value Management)

Officials with the Office of Management and Budget (OMB) may request documentation about a contractor's compliance with ANSI/EIA-STD-748 (Earned Value Management) at any time. OPM's CIO will make documentation about a contractor's compliance with ANSI/EIA-STD 748 available to OMB upon request.

6.2 Contract Requirements for Operational Analysis

OPM government employees and contractors must implement operational analysis techniques for OPM Major IT investments that are in steady state operations.

OPM's Earned Value Management System Description (EVMSD) describes the processes to be followed for conducting operational analysis of steady state investments. The EVMSD is available through the Office of the Chief Information Officer, IT Investment Management unit.

6.3. Reporting Earned Value Management Data for Government and Contractor Efforts

The program manager for an investment must submit earned value data for the preceding month for both contractor and government effort to the Earned Value Program Management Office by the tenth work day of each month. When actual cost is not available, the use of an accrual method shall be employed to report actual cost. The EVM PMO in the IT Investment Management unit will process EVM data by the fifteenth work day of the month.

7. FEDERAL IT DASHBOARD REPORTING REQUIREMENTS

OPM Major IT Investments must update cost and schedule data at level 3 or lower of the WBS in six month or shorter durations on the Federal IT Dashboard on a monthly basis. Work breakdown structure (WBS) Levels 1 and 2 typically do not provide enough information to describe the work to be accomplished in short enough duration that early warnings of poor investment performance can be identified.

In addition, Major IT Investments requiring the use of EVM must include the following data elements in monthly submissions to the Federal IT Dashboard at a minimum:

- Budget At Completion (BAC) for the investment
- Cumulative to Date Budgeted Cost for Work Scheduled (BCWS)
- Cumulative to Date Budgeted Cost for Work Performed (BCWP)
- Cumulative to Date Actual Cost for Work Performed (ACWP)
- Cumulative to Date Cost Variance (CV)
- Cumulative to Date Cost Performance Index (CPI) for the investment
- Cumulative to Date Schedule Variance (SV)
- Cumulative to Date Schedule Performance Index (SPI) for the investment.
- Estimate at Completion (EAC) for the investment

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- Forecasted Variance at Completion both in Schedule and Cost

Major IT Investments must also perform other updates in accordance with OMB instructions. Contact the eCPIC Program Manager in the IT Investment Management unit for the most current guidance.

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APPENDIX A: ACRONYMS

Acronym	Expansion
ACWP	Actual Cost for Work Performed
ANSI/EIA	American National Standards Institute/Electronics Industries Alliance
BAC	Budget at Complete
BCR	Baseline Change Request
BCWP	Budgeted Cost for Work Performed
BCWS	Budgeted Cost for Work Scheduled
CAM	Control Account Manager
CIO	Chief Information Officer
CPIC	Capital Planning and Investment Control
CPI	Cost Performance Index
CV	Cost Variance
DM&E	Development, Modernization, and Enhancement
ESC	Executive Steering Committee
EV	Earned Value
EVM	Earned Value Management
EVMS	Earned Value Management System
EVMSD	Earned Value Management System Description
FAR	Federal Acquisition Regulations
FPDS	Federal Procurement Data System
GAO	Government Accountability Office OR Government Accounting Office
IBR	Integrated Baseline Review
IMS	Integrated Master Schedule
IRB	Investment Review Board
IT	Information Technology
MBL	Master Budget Log
MOU	Memorandum of Understanding
MR	Management Reserve
MSL	Master Schedule Log
OMB	Office Management and Budget
OPM	Office of Personnel Management
O&M	Operations and Maintenance
SPI	Schedule Performance Index
PMB	Performance Measurement Baseline
STD	Standard
SOO	Statement of Objectives
SOW	Statement of Work
SV	Schedule Variance
UB	Undistributed Budget
UPI	Unique Project Identifier

WBS	Work Breakdown Structure
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APPENDIX B: GLOSSARY

authorize: approve

baseline: a standard against which actual work of an investment is measured. In this policy, actual work is measured in terms of cost and schedule, technical scope, and business-related performance metrics.

baseline change requiring CIO approval is any modification to *any* of the following;

- the schedule of an investment at Level 1, 2 or 3 of the work breakdown structure (WBS),
- the cost estimate of the investment at Level 1, 2, or 3 of the work breakdown structure;
- the technical scope of the investment, *or*
- business-related performance metrics of the investment.

A baseline change includes any updates to schedule, cost, technical scope, or business related performance metrics for information displayed on the Federal IT Dashboard for the investment and any updates to budget exhibits including the Exhibit 300 and the Exhibit 53.

baseline management: the processes for establishing a performance measurement baseline for an IT investment and for managing and reporting any subsequent changes to it. Baseline management also includes the measure of business outcomes or outputs as compared to a measurable objective.

budget: the monetary amount authorized by the CIO to execute the performance measurement baseline

budget: [insert definition related to Congress's funding role under the Constitution]

capital asset: land, structures, equipment, intellectual property (e.g., software), and information technology (including IT service contracts) used by the Federal Government and having an estimated useful life of two years or more. (See OMB Circular A-11, Part 7.)

capital planning and investment control (CPIC) process: a management process for ongoing identification, selection, control, and evaluation of investments in information resources. The process links budget formulation and execution, and is focused on agency missions and achieving specific program outcomes. (See OMB Circular A-130, Section 6 at http://www.whitehouse.gov/omb/Circulars_a130_a130trans4/#6.)

complex information technology investment: the nature of an information technology investment is complex if it requires the introduction of technology that is new to OPM, AND if it introduces changes or software development that requires multiple years to complete, AND if the changes affect multiple OPM programs or multiple federal agencies.

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control account: a management control point at which budgets, Earned Value, estimates, and actual costs are accumulated and compared for variance analysis. It is formed by the intersection of the organizational, Work Breakdown Structure (WBS), and cost element dimensions. The control account is a natural control point for cost and schedule planning and control since it identifies the work assigned to one responsible organization on one Work Breakdown Structure (WBS) element.

cost baseline: the budget approved by the CIO to accomplish the technical scope of work for an investment.

Development, Modernization and Enhancement: development of new solutions and modernization and enhancement to existing solutions

earned value: the value of work performed

earned value data: metric data of cost and schedule performance

earned value management: a management technique which uses past performance to predict future cost and schedule performance results. All work is planned, budgeted, and scheduled in time-phased "planned value" increments constituting a cost and schedule measurement baseline. (See OMB Circular A-11, Supplement to Part 7, Capital Programming Guide.)

earned value management system: integrated processes and procedures developed in compliance with ANSI/EIA-748 used to manage an earned value management program and enable the development of reliable EVM statistics about the cost and schedule status of an investment.

Federal IT Dashboard: a public display of information about the plans and status of Federal agencies' major IT investments. The Dashboard is available online at <https://it.usaspending.gov>.

frozen: the cost, schedule, technical scope, business-related performance metrics approved by the CIO to establish the performance measure baseline. None of these elements of the performance measurement baseline can be changed without an approved baseline change request

information system: a discrete set of information resources organized for the collection, processing, maintenance, transmission, and dissemination of information, in accordance with defined procedures, whether automated or manual. (See OMB Circular A-130, Section 6 at http://www.whitehouse.gov/omb/Circulars_a130_a130trans4/#6.)

information technology: any equipment or interconnected system or subsystem of equipment, that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by an executive agency. For purposes of the preceding sentence, equipment is used by an executive agency if the equipment is used by the executive agency directly or is used by a contractor under a contract with the executive agency which (i) requires the use of such equipment, or (ii) requires the use, to a significant extent, of such equipment in the performance of a service or the furnishing of a

product. The term "information technology" includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services), and related resources. The term "information technology" does not include any equipment that is acquired by a Federal contractor incidental to a Federal contract. The term "information technology" does not include national security systems as defined in the Clinger-Cohen Act of 1996 (40 U.S.C. 1452). (See OMB Circular A-130, Section 6 at http://www.whitehouse.gov/omb/Circulars_a130_a130trans4/#6.)

information technology investments: all spending on information technology regardless of amount or funding source. An IT investment may include a project or projects for the development, modernization, enhancement, or maintenance of a single IT asset or group of IT assets with related functionality and the subsequent operation of those assets in a production environment. While each asset or project would have a defined life-cycle, an investment that covers a collection of assets intended to support an ongoing business mission may not.

integrated master schedule (IMS): the activities to execute the work to be performed for the investment, including contractor and federal employee work. The IMS must be traceable to a list of all activities required for the investment so that the attainability of investment objectives can be verified, progress toward program objectives can be verified, and program schedule activities can be integrated with activities for all related components of the investment.

IT investment portfolio: all information technology investments

key performance measures: the indicators or metrics that are used to gauge program performance in terms of the most significant or important business goals, schedule goals or technical objectives of the investment.

major information system: an information system that requires special management attention because of its importance to an agency mission; its high development, operating, or maintenance costs; or its significant role in the administration of agency programs, finances, property, or other resources. (See OMB Circular A-130, Section 6 at http://www.whitehouse.gov/omb/Circulars_a130_a130trans4/#6.)

major information technology investment (OPM criteria): an information technology investment that-

- Is managed by an OPM project manager AND
 - is for financial management and obligates more than \$500,000 annually; OR
 - the Exhibit 53 shows more than \$30 million in development, modernization and enhancement (DME), steady state or both types of funds over a 3-year period for the investment; OR
 - the investment requires special OPM management attention because:
 - the nature of the investment is complex, AND
 - the investment is important to an OPM policy or program, AND
 - the investment is a high priority of the OPM Director, the President, Congress or OMB.

- An investment may be designated major by the Chief Information Officer, the Investment Review Board (IRB), or Office of Management and Budget, regardless of the factors listed above.

master budget log (MBL): the source document in which the cost baseline is recorded for the performance measurement baseline (PMB). The Master Budget Log lists the control account numbers and allocated budget amounts for Development/Modernization/Enhancement (DME) funds of the investment. It is a required artifact for investments managed under EVM and is maintained by the program manager.

master schedule log (MSL): the source document of changes to an investment's work breakdown structure and schedule activities, in chronological order. It is maintained by the program manager for the investment.

mixed life cycle investment: an investment having both development/modernization/enhancement (DME) and steady state components. For example, a mixed life-cycle investment could include a prototype or module of a system that is operational with the remainder of the system in DME stages; or, a service contract for steady state on the current system with a DME requirement for system upgrade or replacement. (See OMB Circular A-11, Part 7, Section 300.)

operational analysis: a method of examining the ongoing performance of an operating asset investment and measuring that performance against an established set of cost, schedule, and performance goals. (See OMB Circular A-11, Supplement to Part 7, The Capital Programming Guide.)

outcome measure: an assessment of the results of a program activity compared to its intended purpose.

output measure: the tabulation, calculation, or recording of activity or effort and can be expressed in a quantitative or qualitative manner.

performance goal: the target level of performance expressed as a measurable objective, against which actual achievement can be compared. Performance goals can be stated as either outcomes or outputs, but to be complete they should incorporate targets and timeframes into a performance measure.

performance indicator: a particular value or characteristic used to measure output or outcome. Performance indicators describe how well a program is achieving its objectives. They describe specifically what to measure to determine whether an objective has been achieved.

Performance-Based Management System: a set of processes in which the data quality needs, mandates or limitations of a program or project are specified and used as the basis for design decisions for the investment.

performance measure: the indicator or metric that is used to gauge program performance. Performance measures can be either outcome or output measures.

performance measurement baseline (PMB): the cost, schedule, and technical work scope against which accomplishments will be measured. The Performance Measurement Baseline reflects not only the projected cost and schedule necessary for achieving the technical work scope, but also the business-related performance metrics and results, for which the investment is established. It is prepared for all IT investments and is maintained by the program manager for the investment. The Performance Measurement Baseline is composed of information that appears in several documents. See Appendix F for the list of documents required for the Performance Measurement Baseline.

performance metric baseline: a baseline that specifies the attributes of the performance metric and the performance targets to be achieved. It is maintained by the program manager for the investment.

performance metrics: the measures designed to drive improvement and characterize progress made. These are specific quantifiable performance measures based on individual expected work outputs.

performance standards: verifiable, measurable levels of service in terms of quantity, quality, timeliness, location, and work units. Performance standards are used in a performance-based PWS to (1) assess (i.e., inspect and accept) the work during a period of performance; (2) provide a common output-related basis for preparing private sector offers and public tenders; and (3) compare the offers and tenders to the PWS. The requiring activity's acceptable levels of service are normally stated in the PWS. The solicitation includes performance standards.

performance target: the quantifiable or otherwise measurable characteristics that tell how well a program must accomplish a performance measure.

Performance Work Statement (PWS): a statement in the solicitation that identifies the technical, functional, and performance characteristics of the agency's requirements. The PWS is performance-based and describes the agency's needs (the "what"), not specific methods for meeting those needs (the "how"). The PWS identifies essential outcomes to be achieved, specifies the agency's required performance standards, and specifies the location, units, quality and timeliness of the work.

program activity: a specific activity or project as listed in the program and financing schedules of the annual budget of the United States Government.

program evaluation: an assessment, through objective measurement and systematic analysis, of the manner and extent to which Federal programs achieve intended objectives.

scope of work: see "work scope" below.

steady state investment: an information technology investment which has deployed a solution that is operational.

schedule baseline: is a project schedule used in measuring project progress and contract performance.

statement of objectives: defines an investment's desired outcomes and resulting product or deliverable. It specifies features and functions.

statement of work: the description of the work or services required by the government for a contractor to deliver a product, service, or result. It includes the features and functions described in the investment's statement of objectives.

technical baseline: the work scope required to meet the technical objectives of the investment. The work scope is derived from the investment's Statement of Work (SOW) and Statement of Objectives (SOO).

work scope: the work that needs to be accomplished to deliver a product, service, or result with the specified features and functions.

APPENDIX C: REFERENCES

C.1 External and Internal Issuances Incorporated by Reference

C.1.1 External References

American National Standards Institute (ANSI)/ Electronic Industries Association (EIA) Standard (STD)-748 (Earned Value Management). Although this is a required reference, this standard is only available through purchase and can be found at:

<http://webstore.ansi.org/RecordDetail.aspx?sku=ANSI%2FEIA-748-B>

Clinger-Cohen Act of 1996, February 10, 1996,

<http://www.cio.gov/index.cfm?function=specdoc&id=319>

Chief Financial Officers Council guidance documents: <http://www.cfoc.gov/>

The Federal Acquisition Reform Act (FASA) and the Federal Acquisition Regulations (FAR) Implementation of the Federal Acquisition Streamlining Act. See reference library for Acquisition Reform (ARNET) at <http://www.arnet.gov>.

Government Accountability Office (GAO) Cost Estimating and Assessment Guide, March 2009, <http://www.gao.gov/new.items/d093sp.pdf>

Office of Management and Budget (OMB) memorandum M-10-27 of June 28, 2010, Information Technology Investment Baseline Management Policy,

http://www.whitehouse.gov/sites/default/files/omb/assets/memoranda_2010/m10-27.pdf

Office of Management and Budget (OMB) memorandum M-11-29 of August 8, 2011, CIO Authorities. <http://www.whitehouse.gov/sites/default/files/omb/memoranda/2011/m11-29.pdf>

Office of Management and Budget (OMB), Circular A-11, Supplement to Part 7, The Capital Programming Guide, v2.0.

http://www.whitehouse.gov/sites/default/files/omb/assets/a11_current_year/part7.pdf

C.1.2 Internal OPM References

Earned Value Management System, Contracting Policy number 34.2 (3/27/12), available on OPM's website at

<http://www.opm.gov/DoingBusiness/contract/pdf/policies/34.2EarnedValueManagementSystem.pdf>

Earned Value Management System Description (EVMSD), available through the Office of the Chief Information Officer, IT Investment Management unit.

Integrated Baseline Review Guide, available through the Office of the Chief Information Officer, IT Investment Management unit.

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Investment Review Board Charter, available internally within the OPM firewall on THEO at [Investment Review Board - Charter](#). For external users, a copy of the Investment Review Board – Charter may be requested from the Office of the Chief Information Officer

OPM System Development Life Cycle (SDLC) (Information Technology Systems Manager), available on THEO at <http://theo.opm.gov/itsm/>

OPM Cost Estimating and Assessment Policy, available on THEO at <http://theo.opm.gov/policies/OPMCostEstimationandAssessmentPolicy.pdf>.

Policy on Information Technology (IT) Procurement, available on THEO at http://theo.opm.gov/policies/ispp/it_procurement.pdf

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APPENDIX D: Baseline Change Request Template

MEMORANDUM

Date:

TO: Chief Information Officer

FROM: [Investment Owner or Program Manager name and title]

SUBJECT: Baseline Change Request for [Investment Name]

We request your approval of the following baseline for the [investment name] investment.

[The following are instructions to the requester.]

1. Has a baseline been approved for this investment in the past? [Select one.]
 - a. No, this is the first baseline request for this investment. [Answer questions 2, 3, 4, 13, and 14.]
 - b. Yes, this is a rebaseline request for the investment. [Answer questions 2 – 12 and 14.]
2. Briefly summarize the request and which baseline(s) are to be changed or established for this investment:
 - a. Cost
 - b. Schedule
 - c. Performance measures
 - d. Performance indicators
 - e. Performance targets
 - f. All of the above
3. Briefly summarize the reasons for the request, including the business need for the request.
4. List the key performance measures for the investment and the current and proposed performance indicators and targets for those measures.

Key Performance Measures	Current Performance Indicators	Proposed Performance Indicators	Current Targets	Proposed Targets

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5. For a rebaseline request, briefly summarize the implications of the changes if they are approved. [For example, what are the original commitments of this investment and how do the requested changes relate to those commitments? How would the rebaseline affect investment timelines, cost, ability to accomplish its original goals, the agency mission, contract status, etc.]
6. For changes to the cost baseline:
 - a. What specific changes do you want the CIO to approve for the baseline cost of the investment?
 - b. What is the amount of the projected change?
 - c. In what time period?
 - d. Why do you request the approval?
 - e. Provide a cost estimate detailing variance from the most recently approved cost baseline.
 - f. Provide a Master Budget Log providing traceability of any changes effecting cost at the Control Account level.
7. For changes to the schedule baseline:
 - a. What specific changes do you want the CIO to approve to the project schedule?
 - b. Why are the changes required?
 - c. Attach a copy of the Master Schedule log for the investment, detailing the chronology of changes to the investment's work breakdown structure. Include (1) the current milestones at Level 3 of the work breakdown structures for the investment, and (2) the proposed milestones at Level 3 for the CIO's approval. Clearly label the milestones as "Current" and "Proposed" to facilitate review.
8. For changes to the business related performance measures:
 - a. What specific changes do you want the CIO to approve in regard to the performance baseline for this investment, for example:
 - The addition or removal of performance measures? If so, which ones? Why?
 - The modification of performance indicators?
 - If so, list the current and proposed indicators
 - Explain why the indicators should change.
 - The modification of performance targets?
 - If so, list the current and proposed targets
 - Explain why the targets should change.
 - b. Other changes?
9. Do the proposed changes reflect changes in the investment's scope or capabilities? (Yes or No)

If yes, please describe.
10. Do the changes reflect problems with the investment? (Yes or No)

If "Yes":

 - a. Briefly summarize the problems
 - b. Identify the contributing factors

IT Baseline Management Policy

- c. Indicate why the current plan is not feasible
- d. Can the problem(s) be remediated and controlled by the investment? (Yes or No)
If so, how? (Please describe.)
Provide the remediation plan for preventing problem recurrence. If none exists, please indicate "None".

11. If the changes do not reflect problems with the investment, summarize what they reflect.

12. What are the contract implications of this change request?

Does the request reflect actions that must be taken to address contracting constraints and risks? If so, how?

13. For a new baseline request, please provide the following:

- a. A copy of the Integrated Master Schedule
- b. A cost estimate for all activities in the proposed baseline
- c. The Master Schedule Log for the DM&E related activities
- d. The Master Schedule Log providing traceability of cost at the Control Account level if the use of EVM is required for the DM&E related activities of the investment.

14. Contact Information:

Provide the name, title, email address, and phone number of the person who can provide more information about the Baseline Change Request.

Accept:

Reject:

Matthew Perry, CIO Date

Matthew Perry, CIO Date

CIO Remarks:

Appendix E

IT Baseline Change Request Self-Assessment Checklist

Before a program manager submits a Baseline Change Request (BCR) to the CIO for approval, the program manager must verify that the BCR meets the following conditions:

- The cost, schedule, technical requirements, and performance targets of the investment are consistent with each other
- The cost, schedule, and performance measures listed in the CPIC tool match the same information listed in the agency's Earned Value Management System tool set when the use of Earned Value Management is required
- The budgets for each control account from the Master Budget Log match the budgets entered for the control account in the agency Earned Value Management System tool set when the use of Earned Value Management is required
- Master Schedule Log has been prepared providing the chronology of changes to the investment's work breakdown structure and variance from the most recently approved Performance Measurement Baseline
- The total Budget at Complete in the Master Budget Log, when the use of Earned Value Management is required, matches the total Budget at Complete being proposed on the Federal IT Dashboard and the total Budget at Complete in the agency Earned Value Management toolset

Appendix F

Records Required for Developing and Maintaining a Performance Measurement Baseline

The following records must be developed and maintained by the Program Manager to document the Performance Measurement Baseline for an investment. The records must be consistent with each other. (See Appendix B for the definition of Performance Measurement Baseline.)

For ALL investments:

Program managers for ALL investments must develop and maintain the following documents:

- A cost estimate for the investment developed using the Government Accountability Office (GAO) Cost Estimating and Assessment Guide, March 2009, which is required by the OPM Cost Estimating and Assessment Policy. See Appendix C (References) for links to the GAO Cost Estimating and Assessment Guide and the OPM Cost Estimating and Assessment Policy.
- Master Schedule Log
- A Integrated Master Schedule when there are two or more subordinate schedules
- A Master Schedule when there are no subordinate schedules
- Technical work scope documents
- Business-related performance measures
- Budget exhibits for the investment
- IT capital planning tool content (e.g., eCPIC)
- Federal IT Dashboard content about the investment.

Additional Requirements

For investments required to use EVM under this policy, program managers must ALSO develop and maintain the following:

- Cost Baseline. The program manager must maintain the cost baseline in the Master Budget Log (MBL) for such investments
- Content of the agency's centrally-administered Earned Value Management tool. The program manager must maintain the investment's information in the agency's centrally-administered Earned Value Management tool (e.g., Primavera) and ensure it is current.



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