



United States
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Agriculture

**Office of the
Chief Information Officer**

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INFORMATION TECHNOLOGY EARNED VALUE MANAGEMENT

Revision History

Date	Description of Change
12-31-05	Origination
5-1-08	References to the \$20M and \$50M DME thresholds were deleted.
1-15-09	<ol style="list-style-type: none">1. Added Baseline Management.2. Raised the thresholds for validating and approving a revised baseline from a 5% or \$5M change in BAC or completion date to a 10% or \$10M change in BAC or completion date.3. References to “ANSI/EIA-748-A” were changed to “ANSI/EIA-748 (current version).”4. Additional references are listed.
7-22-09	OMB’s published rebaselining “excuses” are included

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DEPARTMENTAL REGULATION		NUMBER: 3130-006
SUBJECT: Information Technology Earned Value Management	DATE: January 11, 2010	
	OPI: Office of the Chief Information Officer	

1. PURPOSE

This regulation defines the policies and responsibilities for implementing, applying and maintaining an Earned Value Management System (EVMS) for major USDA information technology (IT) investments.

2. BACKGROUND

EVM is a project management methodology for objectively measuring project performance and progress. The practice has steadily gained popularity because of the improvements in project planning and execution realized by enterprises that have implemented EVM over the last four decades. The following is a list of some of the relevant legislation, policy and standards related to the use of EVM:

- a. Title V of the Federal Acquisition Streamlining Act of 1994 (FASA) requires agency heads to approve or define the cost, schedule, and performance goals for major acquisitions and to achieve, on average, 90 percent of the cost, schedule, and performance goals established.
- b. The Clinger-Cohen Act of 1996 requires the establishment of processes to analyze, track, and evaluate the risks and results of all major capital investments for information systems for the life of the system.
- c. Office of Management and Budget (OMB) Circular A-11, Part 7, Planning, Budgeting, Acquisition and Management of Capital Assets, and the supplement to Part 7, the Capital Programming Guide, were written to meet the statutory requirements of FASA and the Clinger-Cohen Act.
- d. OMB Circular A-11, Part 7, section 300.4 requires use of an Earned Value Management System (EVMS) that meets the American National Standards Institute (ANSI)/Electronics Industries Alliance (EIA) Standard 748 for those parts of an investment where development effort is required. This includes prototypes and tests to select the most cost effective alternative during the Planning phase, the work during the Acquisition Phase, and any developmental, modification or upgrade work done during the Operational/Steady State Phase. The EVMS is to be applied to both Government and

contractor efforts, regardless of contract type.

3. AUTHORITY

This regulation is published in accordance with the authority vested in the Secretary of Agriculture under 44 U.S.C. 2104 and 3101; and 44 U.S.C. 3501-3548; and delegated to the Chief Information Officer (7 CFR 2.37).

4. REFERENCES

a. Legislation

- (1) Federal Acquisition Streamlining Act of 1994
- (2) Clinger-Cohen Act of 1996

b. Federal Acquisition Regulation (FAR) Subpart 34.2 – Earned Value Management System

c. Office of Management and Budget (OMB)

- (1) Memo M-05-23, Improving Information Technology (IT) Project Planning and Execution, August 4, 2005
- (2) Circular A-11, Section 53, Information Technology and E-Government
- (3) Circular A-11, Section 300, Planning, Budgeting, Acquisition, and Management of Capital Assets
- (4) Capital Programming Guide
- (5) Circular A-130, Management of Federal Information Resources

d. United States Department of Agriculture (USDA) Capital Planning and Investment Control Guide

e. American National Standards Institute (ANSI)/Electronic Industries Alliance (EIA) Standard 748, Earned Value Management Systems

f. National Defense Industrial Association (NDIA) Program Management Systems Committee (PMSC)

- (1) Earned Value Management Systems Intent Guide
- (2) Earned Value Management Systems Application Guide
- (3) Earned Value Management System Acceptance Guide
- (4) Earned Value Management System Surveillance Guide

5. SPECIAL INSTRUCTIONS/CANCELLATIONS

This Departmental Regulation supersedes Departmental Regulation 3130-006 (Information Technology Earned Value Management) dated May 1, 2008.

6. SCOPE

This regulation establishes the USDA EVM policy for major IT investments.

The thresholds that determine applicability of this policy apply only to the development, modernization, or enhancement (D/M/E) expenditures of a major IT investment.

Each USDA mission area, agency, and staff office is obligated to meet the requirements of this policy. Each mission area, agency, and staff office is authorized to develop and implement more-specific policies and procedures or implement lower thresholds as long as they are consistent with this Departmental Regulation.

7. POLICY

a. Compliance with the ANSI/EIA-748 (current version) EVM Standard is required for:

- (1) All new major IT investments for which agencies are planning to spend D/M/E dollars over the agency-defined life cycle.
- (2) All major IT investments that are currently in process and are budgeted for D/M/E spending during the remainder of the life cycle.

b. Inclusion of Government Costs and FTEs

- (1) The D/M/E planned costs for the investment includes all supplied work both contracted and in-house.
- (2) Data collected from each contracted and in-house element of the project will be combined to measure and report an investment's performance.

c. Integrated Baseline Review (IBR)

- (1) All investments required to comply with the ANSI/EIA-748 (current version) standard will perform an IBR.
- (2) The IBR will be conducted in accordance with the Federal Acquisition Regulations (FAR) and be consistent with the ANSI/EIA-748 (current version) standard.
- (3) At a minimum, the IBR must include a review of the accuracy and reasonableness of the Budget at Complete (BAC), completion date, and deliverables.

- (4) The IBR is not complete until the government and all suppliers have agreed on a baseline.
- (5) The agency must document the result of the IBR and submit a copy of the report to OCIO.
- (6) OCIO may require the agency to submit additional supporting evidence and documentation.

d. ANSI Compliance Review

- (1) All investments required to comply with the ANSI/EIA-748 (current version) standard will perform an ANSI Compliance Review.
- (2) The ANSI Compliance Review will evaluate the degree of compliance with each of the ANSI/EIA-748 (current version) standards.
- (3) The agency will provide OCIO with a copy of the ANSI Compliance Review report.

e. USDA EVMS Certification

- (1) Agencies must provide to OCIO a written memorandum for each investment certifying –
 - (a) The EVM system is in full compliance with the ANSI/EIA-748 (current version) EVM Standard.
 - (b) EVM status reports will be provided to OCIO on a monthly basis.
- (2) Certification is not complete until OCIO countersigns the memorandum.
- (3) OCIO may revoke the certification of any investment that –
 - (a) Fails to provide monthly reports.
 - (b) Submits inconsistent, incomplete, or inaccurate data.
 - (c) Rebaselines without the proper approvals.

f. EVM Surveillance

- (1) USDA will perform EVM Surveillance in a manner consistent with the National Defense Industrial Association (NDIA) Program Management Systems Committee (PMSC) Surveillance Guide.
- (2) OCIO will develop an annual EVM Surveillance Plan.

- (3) The EVM Surveillance Plan will list the investments required to perform surveillance.
- (4) EVM Surveillance will determine whether or not an agency's processes and procedures continue to satisfy the ANSI/EIA-748 (current version) standard for an EVMS.
- (5) The agency will report the findings in a memorandum to the agency CIO and deliver a copy to OCIO.
- (6) Agencies may establish EVM Surveillance programs as needed.

g. Cost and Schedule Variances

- (1) An agency must submit a Corrective Action Plan (CAP) to OCIO for each investment that reports a cost or schedule variance of plus or minus 10% or more on the monthly status report.
- (2) The CAP must include, but is not limited to –
 - (a) The name of the agency, investment, and project manager.
 - (b) The current cost variance, schedule variance, and BAC.
 - (c) The reason for the variance.
 - (d) The proposed solution.
 - (e) An estimated date for correcting the variance.
 - (f) The name of the individual responsible for implementing the solution.
 - (g) A statement indicating whether or not rebaselining will be required.
- (3) OCIO may require an agency to submit documentation in addition to the CAP.

h. Baseline Management

- (1) Establishing the Initial Baseline
 - (a) Each investment must establish a baseline for cost, schedule, and performance measurement in accordance with ANSI/EIA-748 (current version) guidelines.
 - (b) The initial baseline must be validated, approved, and documented during the initial IBR.
- (2) Rebaselining
 - (a) Definition
 1. Rebaselining is defined as a change in the planned cost, schedule or performance of an investment.

2. A change in the planned cost is defined as a change in the Budget at Complete (BAC).
 3. A change in the planned schedule is defined as a change in the completion date.
 4. A change in the planned performance is defined as a change in the deliverables.
- (b) Justification for Rebaselining

An investment may be rebaselined for the following reasons –

1. External Rebaselining Reasons

- a. External – Direct Mandate: Rebaselined due to investment-specific budget changes mandated by Congress or OMB (e.g., Congressional rescissions or OMB budget decisions).
- b. External – Agency Mandate: Rebaselined due to agency budget changes resulting from OMB, Congressional, or legislative action (e.g., Fund disaster recovery efforts, legislation directing all agencies to take across-the-board reduction, leaving each agency with discretion to make the cut).
- c. External – Phase Gate: Rebaselined due to a change from one investment life-cycle phase to another (i.e., planning, acquisition, mixed life cycle, operations and maintenance) where cost and schedule milestones are expected to change significantly.
- d. External – Protest: Rebaselined due to sustained long-term protest of contract.

Internal Rebaselining Reasons

- a. Internal – Bureau Mandate: Rebaselined due to Department to bureau budget changes (e.g., Department passback) that necessitates a change to the previously approved baseline.
- b. Internal – IRB Mandate: Rebaselined due to agency investment review board approved changes in requirements, performance measures or scope (including enhancements and changes to functionality) or due to agency investment review board approved business alignment change (e.g., project mergers or business realignments).

(d) Process for Developing a Revised Baseline

1. The project manager will revise the Work Breakdown Structure (WBS), the Integrated Master Schedule and other relevant documentation to reflect the new BAC, completion date and deliverables.
2. The revised baseline must comply with ANSI/EIA-748 (current version) guidelines.
3. If the revised baseline exceeds the thresholds for validation and approval, the project manager will –
 - a. Complete a Baseline Change Request.
 - b. Receive all required agency approvals.
 - c. Submit the Baseline Change Request to OCIO for review and approval.
4. If the investment has a high dollar value or high level visibility, OCIO may require the agency to obtain additional approvals from Department officials or governance boards.
5. A revised baseline will not be used for variance calculations or performance measurement until all required approvals are received.

(e) Validation of a Revised Baseline

1. The agency must conduct an IBR of any revised baseline that exceeds one or more of the thresholds specified in Section 7.h.(2)(c).
2. At a minimum, the IBR must validate the accuracy and reasonableness of the BAC, the completion date and the deliverables.
3. Agencies may validate other data as part of the IBR.
4. The IBR is not complete until the government and all suppliers have agreed on a baseline.

(f) Approval of a Revised Baseline

1. The agency CIO, investment sponsor or appropriate agency governance board must approve revisions to the baseline that exceed one or more of the thresholds specified in Section 7.h.(2)(c).
2. The project manager may not approve revisions to the baseline that exceed one or more of the thresholds specified in Section 7.h.(2)(c).

3. Once all agency level approvals are received, OCIO must approve the revised baseline.
4. OCIO may require the agency to obtain additional approvals from Department officials or governance boards.
5. When determining whether or not additional approvals are required, OCIO will consider the dollar value and visibility of the investment.
6. All approving officials must be Federal government employees.

(g) Documenting a Revised Baseline

1. Changes to the baseline must be documented in accordance with the ANSI/EIA-748 (current version) standard and the investment's Earned Value Management System (EVMS) description.
2. OCIO will maintain a Baseline Change Request form for agency use.
3. The Baseline Change Request form includes, but is not limited to –
 - a. The name of the investment.
 - b. The name of the project manager.
 - c. The current BAC and completion date.
 - d. The new BAC and completion date.
 - e. The reason for the change.
 - f. A description of the change.
 - g. The name of the approving official or governance board.
 - h. The date of approval.

(3) Replanning

- (a) Replanning is defined as a change that does not affect the Budget at Complete (BAC), completion date, or deliverables of an investment.
- (b) Agencies may develop policies and procedures for replanning an investment.

8. AGENCY IMPLEMENTATION

- a. Each USDA mission area, agency, and staff office shall:
 - (1) Develop long-range plans for EVM systems and procedures to enable full compliance with the ANSI/EIA-748 (current version) EVM guidelines for IT investments.
 - (2) Certify the EVM process used by the investment is in full compliance with the ANSI/EIA-748 (current version) EVM Standard based upon independent review.

Compliance with the standard is a prerequisite to the IT acquisition approval by OCIO.

- (3) Establish documented policies and procedures for project performance measurement for all investments as directed in the USDA Capital Planning and Investment Control (CPIC) Guide based on the following criteria:
 - (a) For investments that are purely steady-state, complete an operational analysis.
 - (b) For non-major investments with D/M/E, require project performance-based management that provides for project plans, schedules, and budgets and the measurement of the execution against those plans, schedules, and budgets.
 - (4) For major IT investments with D/M/E, provide planned value, earned value, and actual cost performance information on a monthly basis to OCIO by updating the current USDA EVM enterprise repository.

9. OVERSIGHT, MONITORING AND REVIEW

OCIO will maintain oversight and final approval authority for all monitoring and review activities. Each agency shall be responsible for performing the following monitoring activities of its investments.

- a. Integrated Baseline Reviews (IBRs): All major IT investments with D/M/E will require the use of an EVMS (see section 7). Agencies will conduct an IBR in accordance with the Federal Acquisition Regulation and be consistent with the ANSI/EIA-748 (current version) Standard. A copy of the IBR report will be sent to OCIO when completed.
- b. Ongoing monitoring to verify the functioning of approved systems, the validity of cost data, and actual progress of the investment(s).
- c. Monthly monitoring of EVM data reported to OCIO.

10. RESPONSIBILITIES

a. Secretary of Agriculture

As required by the Federal Acquisition Streamlining Act of 1994, the Secretary of Agriculture is vested with the authority and obligation to make continuation decisions for all major IT investments that have a cost, schedule, or performance variance of plus or minus 10% or more.

b. USDA Chief Information Officer (CIO)

The Secretary of Agriculture has delegated to the USDA CIO oversight responsibility and authority for the Department-wide management of IT investments. The CIO will:

- (1) Administer the Departmental IT EVM Program through the creation of policy, guidance to the agencies, and oversight of EVM implementation.
- (2) Monitor EVM of investments as defined in Section 7 on a monthly basis.
- (3) Place on an EVM watch list all major IT investments that have a cost or schedule variance of plus or minus 10% or more for one or more months. OCIO will also prepare an investment review for each investment based on the agency-submitted Corrective Action Plan (CAP).
- (4) Prepare a recommendation to the Secretary of Agriculture for continuation or cancellation for all major IT investments that have a cost or schedule variance of plus or minus 10% or more for three consecutive months.
- (5) Review Departmental IT EVM reporting and record keeping requirements, including those contained in Departmental Regulations, the CPIC Guide, and other directives written to meet external requirements, to ensure that they reflect adequate standards for the Department and program agencies and staff offices, have practical utility for the Department and program agencies and staff offices, and still meet all internal and external requirements.
- (6) Act as the USDA liaison with OMB with regard to implementation and execution of EVM for major IT investments at USDA. Among the duties inherent in this responsibility are the receipt of materials and information from OMB, distribution of OMB materials and information to USDA organizations, submission of EVM data and materials to OMB, and communication with OMB to clarify EVM issues identified by USDA.
- (7) Baseline Management
 - (a) Maintain the Baseline Change Request form
 - (b) Review and approve Baseline Change Requests.

c. Agency Heads

The head of each agency is responsible for ensuring IT investments support agency programs and that they are managed efficiently. Agency Heads ensure that the organization complies with section 7 of this directive. Agency executives will submit corrective action plans to the USDA CIO for investments that are on the EVM watch list (see section 10.b.(3) above).

d. Agency Program/Investment Managers and CIOs

Agency Program/Investment Managers and CIOs are responsible for supporting and ensuring that IT investments are managed efficiently. Agency Program/Investment Managers and CIOs must comply with section 7 of this directive with the following considerations:

- (1) Program/Investment Managers have the primary responsibility for program/investment management, including the application of ANSI/EIA-748 (current version) to contracts, when applicable, through the contracting officer, and on in-house efforts that comprise a significant portion of the investment. The program/investment manager will establish and maintain a performance measurement baseline (PMB) for the total investment and notify the agency and USDA CIOs, by way of a Baseline Change Request, when significant changes to the PMB are required. A significant change is any change that results in a change in total investment cost or schedule performance of more than plus or minus 10 percent, or that results in a scope change that affects the functionality of the system.
- (2) The program/investment manager prepares a Corrective Action Plan (CAP) for an investment when needed (see section 10.b.(3) above).
- (3) Agency CIOs are responsible for ensuring that program/investment managers have adequate support for the planning, development, and execution of IT investment projects and for maintaining sufficient documentation to support the Office of Management and Budget (OMB) Circular A-11 Exhibit 300 program management information used in the submittal of budget requests. (The Exhibit 300 is the "Business Case" for a major IT investment. It addresses funding, acquisition, performance, security, privacy, Enterprise Architecture, alternatives, and risks.)
- (4) Baseline Management
 - (a) Revise baselines as needed.
 - (b) Ensure revised baselines comply with the ANSI/EIA-748 (current version) guidelines.
 - (c) Ensure revised baselines are validated, approved and documented as required.

11. DOCUMENTATION

Each USDA mission area, agency, and staff office shall create and maintain proper and adequate documentation of the policies, decisions, and procedures for the implementation of EVM for the Department to ensure practical and consistent application of EVM requirements to USDA IT investments. Regardless of media, official records shall be developed and maintained in accordance with DR 3080-001, Records Management.

12. ABBREVIATIONS

ANSI	American National Standards Institute
BAC	Budget at Complete
CAP	Corrective Action Plan
CIO	Chief Information Officer
D/M/E	Development, Modernization or Enhancement
EIA	Electronic Industries Alliance
EVM	Earned Value Management
EVMS	Earned Value Management System
FTE	Full Time Equivalent
IBR	Integrated Baseline Review
NDIA	National Defense Industrial Association
OCIO	Office of the Chief Information Officer
PMB	Performance Measurement Baseline
PMSC	Program Management Systems Committee
WBS	Work Breakdown Structure

13. DEFINITIONS

- a. Agency Head: Person designated in charge of a USDA agency or staff office; i.e. Agency Administrator, Chief, or Office Director.
- b. ANSI/EIA-748 (current version): The American National Standards Institute (ANSI)/Electronic Industries Alliance (EIA) Standard for Earned Value Management Systems.
- c. Baseline: See Performance Measurement Baseline (PMB).
- d. Certification of Earned Value Management System: Each USDA Agency Head with responsibility for a major IT investment(s) will provide a written certificate to OCIO that the agency has an EVM system that complies with ANSI/EIA-748 (current version).
- e. Corrective Action Plan: A document in which the agency describes what steps will be taken to bring the cost and schedule performance of an investment on the EVM Watch List back to within a 10 percent variance of the established parameters.
- f. Development, modernization, or enhancement (D/M/E): Cost for new investments, and changes or modifications to existing systems that improve capability or performance, changes mandated by the Congress or agency leadership, personnel costs for project (investment) management, and direct support.
- g. Earned Value (EV): The value of completed work expressed in terms of the approved budget assigned to that work for a schedule activity or work breakdown structure component. Also referred to as the budgeted cost of work performed (BCWP).

- h. Earned Value Management (EVM): A management methodology for integrating scope, schedule, and resources for objectively measuring project performance and progress. Performance is measured by determining the budgeted cost of work performed (i.e. earned value) and comparing it to the actual cost of work performed (i.e. actual cost). Progress is measured by comparing the earned value to the planned value.
- i. EVM enterprise repository: The electronic tool(s) USDA uses to calculate and report on IT investment EVM performance metrics.
- j. EVM System (EVMS): The set of policies, practices, tools, outputs, and personnel resources that together meet the requirements defined in ANSI/EIA-748 (current version).
- k. EVM Watch List: A list of investments maintained by OCIO that are more than 10 percent over cost or behind schedule for a given month. These investments will receive a higher level of scrutiny from OCIO and require corrective action plans.
- l. General support system: An interconnected set of information resources under the same direct management control that shares common functionality. Such a system can be, for example, a local area network (LAN) including smart terminals that supports a branch office, an agency-wide backbone, a communications network, a Departmental data processing center including its operating system and utilities, a tactical radio network, or a shared information processing service organization. Normally, the purpose of a general support system is to provide processing or communications support.
- m. Information system: A discrete set of information technology, data, and related resources, such as personnel, hardware, software, and associated technology services organized for the collection, processing, maintenance, use, sharing, dissemination or disposition of information. A system must have logical boundaries around a set of processes, communications, storage and must:
 - (1) be under the same direct management control;
 - (2) have the same function or mission objective;
 - (3) have essentially the same operating characteristics and security needs; and
 - (4) reside in the same general operating environment.
- n. Integrated Baseline Review (IBR): A review jointly conducted by the customer and the supplier Program Managers and selected staffs to effectively assess the PMB to ensure understanding of the scope of the IT investment, and to better understand inherent risks. Generally conducted at the control account level, the review will examine the scope statement for the control account, the resources assigned, and the schedule parameters to ensure realistic planning and to identify risk.

- o. Major application: A use of information and information technology to satisfy a specific set of user requirements that requires special management attention to security due to the risk and magnitude of harm resulting from the loss, misuse or unauthorized access to or modification of the information in the application. All applications require some level of security, and adequate security for most of them should be provided by security of the general support systems in which they operate. However, certain applications, because of the nature of the information in them, require special management oversight and should be treated as “major”. Agencies are expected to exercise management judgment in determining which of their applications are major.
- p. Major Information Technology Investment: A program, investment or application that requires the submission of an OMB Exhibit 300, or a combination of programs, applications and/or investments that has been designated by OCIO to be major because of risk, external interest, or other factors used by OCIO for determination. The criteria for defining major investments are outlined in the USDA CPIC Guide to Information Technology.
- q. Operational Analysis Review: The comparison of the performance of an IT asset or system to an established baseline (see Appendix D-Operational Analysis Review, USDA CPIC Guide to Information Technology for more information).
- r. Performance: The deliverables or scope of an investment, in the context of “Cost, Schedule, and Performance.”
- s. Performance Measurement Baseline (PMB): The time-phased budget plan against which project performance is measured. It is the schedule for expenditure of the resources allocated to accomplish program scope and schedule objectives. Also referred to as the “Baseline.”
- t. Program: A combination of projects with one common set of objectives.
- u. Project: An effort of finite duration and scope with cost/budget limitations.
- v. Product Performance Measurement: A pre-defined practice that measures the effectiveness and efficiencies gained through the capability/product produced by the program or investment as defined within the context of Appendix G -Performance Measurement, USDA CPIC Guide to Information Technology.
- w. Project Performance Measurement: A pre-defined practice that measures the progress and performance of an investment or program against a performance measurement baseline (PMB) as defined in an official document defined generically as a System Description.
- x. Rebaselining: The general term used for describing a major realignment of the performance measurement baseline to improve the correlation between the work plan and the baseline budget, scope, and schedule.

- y. Surveillance: The process of reviewing the health of the earned value management system (EVMS) process applied to one or more programs. The purpose of surveillance is to focus on using EVMS effectively to manage cost, schedule, and technical performance. An effective surveillance process ensures that the key elements of the process are maintained over time and on subsequent applications.
- z. Work Breakdown Structure (WBS): A product-oriented hierarchical structure that defines the work to be accomplished in the project.
- aa. WBS Dictionary: A companion document to the WBS that describes the scope for each and every WBS element. The WBS Dictionary covers the entire scope of the project including management and support activities performed as part of the project.

End