



Chief Information Officer
Office of Information Services
Centers for Medicare & Medicaid Services

CMS Policy for
Information Technology (IT)
Investment Management &
Governance

May 17, 2007

Document Number: CMS-CIO-POL-INV01-02

TABLE OF CONTENTS

1. PURPOSE.....	1
2. BACKGROUND.....	1
3. SCOPE.....	2
4. POLICY.....	3
4.A. GENERAL POLICY.....	3
4.B. IT INVESTMENT SELECTION & FUNDING.....	4
4.C. IT INVESTMENT IMPLEMENTATION & CONTROL.....	5
4.D. IT INVESTMENT EVALUATION.....	7
5. ROLES AND RESPONSIBILITIES.....	7
5.A. CMS INFORMATION TECHNOLOGY INVESTMENT REVIEW BOARD (ITIRB).....	7
5.B. CMS EXECUTIVE STEERING COMMITTEES (ESCs).....	8
5.C. CMS CHIEF INFORMATION OFFICER (CIO).....	9
5.D. CMS CHIEF TECHNOLOGY OFFICER (CTO).....	9
5.E. CMS CHIEF ENTERPRISE ARCHITECT (CEA).....	10
5.F. CMS CHIEF INFORMATION SECURITY OFFICER (CISO).....	11
5.G. CMS IT INVESTMENT MANAGEMENT & GOVERNANCE SUPPORT STAFF.....	11
5.H. CMS BUSINESS COMPONENT LEADERSHIP.....	12
5.I. CMS BUSINESS OWNERS.....	12
5.J. CMS PROJECT MANAGERS.....	13
5.K. CMS SYSTEM DEVELOPERS/MAINTAINERS.....	14
6. APPLICABLE LAWS/GUIDANCE.....	14
6.1. LAWS.....	14
6.2. REGULATIONS AND GUIDANCE.....	16
7. INFORMATION AND ASSISTANCE.....	18
8. EFFECTIVE DATE/IMPLEMENTATION.....	18
9. APPROVED.....	19
10. ATTACHMENTS.....	19
GLOSSARY.....	19

1. PURPOSE

This document establishes the policy for systematic review, selection/reselection, implementation/control, and continual evaluation of Information Technology (IT) investments at the Centers for Medicare & Medicaid Services (CMS), regardless of the source of funding or resources. Refer to the Glossary in this document for definitions of what constitutes IT and an IT investment.

This policy supersedes the previous version that was signed by the CMS Chief Information Officer (CIO) on December 5, 2001.

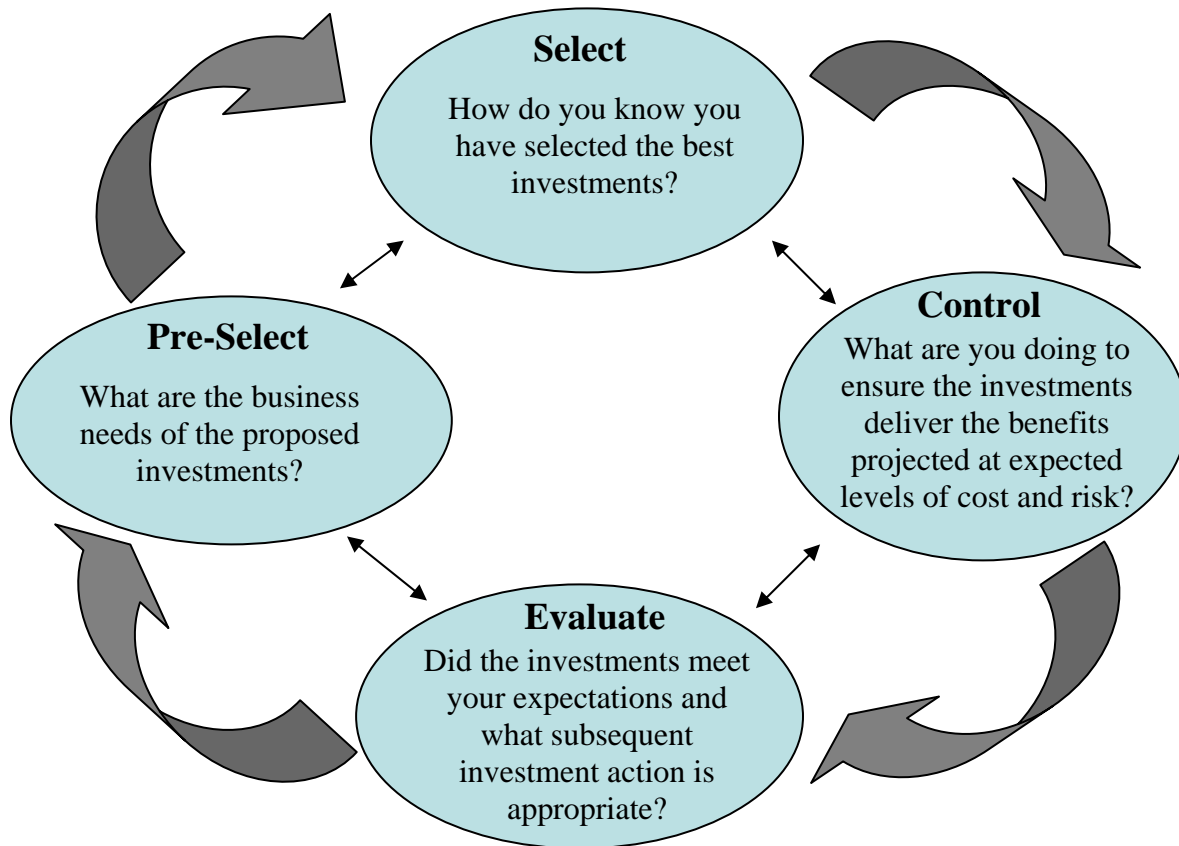
2. BACKGROUND

IT is an extremely important vehicle for Federal agencies to utilize in carrying out their missions. Investments in IT serve to streamline business processes to improve organizational performance, making it possible to conduct business more efficiently and effectively. When carefully managed, IT investments also enrich people's lives by making information widely available and reduce the cost of providing essential Government services. As IT and business processes rapidly evolve, the challenge of realizing the potential benefits of IT and managing such investments wisely becomes much greater.

Congress, the Executive Office, and the Office of Management and Budget (OMB) require Federal agencies to strengthen IT management and governance processes in order to maximize the mission-benefit derived from IT investments, and to improve mission performance and service to the public. For example, the Clinger-Cohen Act of 1996 requires Federal agencies to have a structured process in place for analyzing, tracking, and evaluating the risks and results of all major capital investments for information systems to ensure that IT projects are implemented at acceptable costs, within reasonable time frames, and are contributing to tangible, observable improvements in mission performance. IT investments are to be sound, support existing business functions, and not duplicate existing technologies. The process is to cover the life of each IT investment and is to include explicit criteria for analyzing the projected and actual costs, benefits, and risks associated with the investments.

The Office of Information Services (OIS), headed by CMS' CIO, is responsible for developing an effective, integrated, and structured methodology for systematic review, selection/reselection, implementation/control, and continual evaluation of CMS' IT investments that fully complies with all applicable statutory and regulatory requirements (e.g., Clinger-Cohen Act of 1996), executive guidance (e.g., President's Management Agenda, OMB Circular A-130, Federal Enterprise Architecture (FEA)), and best practices. This structured methodology must also support the strategic and business goals of the Agency, while minimizing risks and maximizing returns throughout an investment's life cycle to ensure effective use of limited resources.

As depicted below, the CMS IT investment management process is built on the conceptual framework laid out by the Department of Health and Human Services' Enterprise Architecture Program Management Office.



CMS' IT investment management process further attempts to bring together best practices from multiple management disciplines, including: financial, acquisition/contract, project, risk, earned value, portfolio, and technology management.

3. SCOPE

This policy applies to all CMS IT investments (including pilot and demonstration projects), throughout their entire investment lifecycle, regardless of the source of funding or resources, whether owned and operated by CMS, or operated on behalf of CMS.

This policy does not supersede any other applicable law or higher level agency directive, or existing labor management agreement in effect as of the effective date of this policy.

4. POLICY

The CMS IT Investment Management and Governance Program consists of a multi-layered structure comprised of policy, processes, procedures, standards and guidelines, with each layer providing an increasing level of detail. The CMS IT Investment Management and Governance policy, processes, procedures, and standards shall be followed unless specifically designated as optional or discretionary, or obviated by written waiver issued by the CMS Information Technology Investment Review Board (ITIRB).

4.A. General Policy

4.A.1. All information required for the CMS IT Investment Management and Governance Program shall be appropriately gathered, stored, maintained, and reported.

4.A.2. Each CMS IT investment/project shall be assigned a classification level based on the nature and sensitivity of the investment/project. This classification will permit CMS to focus the appropriate level of management oversight and scrutiny on the IT investment/project during its life cycle. Each CMS IT investment considered for selection shall be assigned one of the following classification levels based on established cost criteria or other designated factors: Major, Non-Major, or Unfunded. Potential IT investments/projects not yet considered for selection shall be classified as Candidate investments/projects.

4.A.3. CMS “As Is” and “To Be” business processes shall be documented before investments are made in IT to support the processes. An analysis of identified CMS business needs and alternatives to satisfying those needs shall be completed for all proposed IT investments prior to the investment being submitted for a selection decision for funding and/or support. These analyses shall ensure that each proposed IT investment aligns to CMS’ business goals, leverages existing investments and/or technologies, and complies with or advances CMS’ target enterprise architecture.

4.A.4. All CMS IT investments/projects shall have assigned project managers who possess the required competencies and experience essential for the project being managed.

4.A.5. All CMS staff with IT investment management, project management, system design, software development, testing, implementation, and/or operations and maintenance responsibilities shall be educated in the policies, processes, procedures, standards and guidelines that comprise CMS’ integrated IT investment and system life cycle methodology, and/or receive other CMS-sanctioned system development life cycle methodology training.

4.A.6. All IT investments must demonstrate alignment to the FEA Reference Models including the Business Reference Model, Performance Reference Model, Service Reference Model, Technology Reference Model, and Data Reference Model.

4.B. IT Investment Selection & Funding

IT is a key enabler for supporting major CMS business responsibilities. With tight budgets and scarce resources, it is imperative that CMS selects IT investments/projects for funding and/or support that satisfy CMS' rapidly evolving business responsibilities while efficiently managing the Agency's IT resources.

4.B.1. All requests for IT funding (including all requests for IT training funds) shall be reviewed by the CMS Chief Enterprise Architect (CEA) and approved by the CMS ITIRB for inclusion in the President's Budget that is submitted to Congress and in the subsequent CMS Operating Plan that is based on the final budget allocated to CMS by Congress. Appropriations for the full costs of IT investment acquisitions (including life cycle operations costs) shall be requested to ensure that all costs and benefits are fully considered when decisions are made.

4.B.2. Priority consideration for funding and support shall be given to those IT investments that share use of IT across multiple entities within CMS and/or HHS or across other Federal agencies. Redundant IT investments within CMS shall be avoided.

4.B.3. In order for an IT investment/project to be selected for funding in any fiscal year and/or to be included in the CMS IT Investment Portfolio, it shall demonstrate a strong business justification that addresses the financial, technical, and strategic merits of the investment/project, including estimates of full life cycle costs. This process shall be repeated each time funds are allocated to an IT investment/project.

4.B.4. All IT investments/projects shall prepare business process models for the "As Is" and/or "To Be" environments, as well as any additional supporting investment and/or system life cycle documentation required by CMS, HHS, and/or OMB.

4.B.5. Steady state investments and mandatory projects shall be reviewed each year to ensure the investment/project is still required to support the mission, is performing as expected, and is adequately funded. IT investments/projects considered but not included in the CMS IT Investment Portfolio shall remain classified as Unfunded IT investments/projects available for future consideration by the CMS ITIRB.

4.B.6. All CMS IT investments/projects must demonstrate that costs for appropriate IT privacy and security controls, security test and evaluation, and system certification and accreditation are explicitly incorporated into the life cycle planning of all systems. Cost-effective security of CMS information systems must be an integral component of business operations.

4.B.7. CMS business components are required to provide funding for business process modeling, application integration and installation support, data and database administration support, and operations and maintenance support for the life of their systems/applications. All Major IT investments and/or high-risk IT projects are also required to provide funding for Independent Verification & Validation (IV&V).

4.B.8. CMS IT investments/projects selected for funding in any fiscal year and/or included in the CMS IT Investment Portfolio shall:

- Be citizen centered and directly support and align with CMS and Department of Health and Human Services (HHS) Strategic Plans and IT Strategic Plans, including their respective mission and goals, and the President's Management Agenda;
- Fill a performance gap in CMS' ability to meet strategic goals and objectives at the lowest life cycle cost among viable alternatives;
- Align with CMS and HHS Enterprise Architectures;
- Have an acceptable business justification that demonstrates strong project management capabilities, as well as sound investment planning;
- Have well-documented business process models, business requirements, risk assessment, data and security analysis, and business and technical alternatives identified;
- Have an anticipated positive return on investment that is equal to or greater than that achievable through alternative use of resources;
- Provide risk-adjusted cost and schedule goals, and measurable and achievable performance goals;
- Provide a comprehensive risk mitigation and life cycle management plan; and
- Ensure security of data and systems and compliance with applicable laws, regulations, policies, and guidance.

4.C. IT Investment Implementation & Control

As approved CMS IT investments/projects develop and investment expenditures continue, each selected IT investment/project must continue to meet mission needs at the expected levels of cost and risk. If the IT investment/project does not meet expectations or if problems arise, steps need to be quickly taken to address the deficiencies. If mission needs change, CMS must also be able to adjust its objectives for the IT investment/project and appropriately modify expected investment/project outcomes.

4.C.1. All IT investments in the CMS IT Investment Portfolio shall be consistently controlled (monitored and managed) to maximize value, mitigate risks, ensure successful results, and to take corrective action when necessary.

4.C.2. All CMS IT investments/projects shall be managed and implemented in a disciplined manner, using recognized project management practices, and adhering to CMS requirements and guidance as applicable and at an appropriate level of detail and oversight commensurate with the cost, risk, and schedule of the investment/project. Performance measures and management processes shall be used to monitor actual versus expected results. All appropriate business stakeholders and technical experts shall be involved throughout the life cycle of the IT investment/project.

4.C.3. Periodic control and/or milestone reviews shall take place for each approved IT investment/project, when changes to approved investment/project baselines are anticipated, and/or as otherwise required by the CIO, ITIRB, Chief Technology Officer (CTO), or OIS. The CMS ITIRB in collaboration with the CMS CEA will determine whether to continue an IT investment/project with the current baselines (with corrective action plans, if necessary), approve re-baselining, or terminate the IT investment/project.

4.C.4. All IT Investments with DME activities shall demonstrate satisfactory progress toward achieving approved cost, schedule, and performance goals. All IT investments with DME activities must apply earned value management (EVM) policies and procedures as required by the Department. This includes validating the cost, schedule, and performance baselines for reasonableness.

4.C.5. Each IT investment with steady state activities (includes mixed life-cycle investments) shall demonstrate, through a formal operational analysis that is conducted on an annual basis, how well it is meeting program objectives, customer needs, and is performing with regard to original and current baseline cost, schedule, and performance goals, and that the total costs for the investment cover the life cycle and include all budgetary resources.

4.C.6. Acquisition plans shall be developed that reflect cost and schedule milestones and that change as the baselines are adjusted, with inputs from all CMS plans. Acquisition plans shall contain outputs that feed into the budget and CMS IT Investment Management and Governance processes. The plans shall also link resources to results through performance and earned value management, as well as build from the current enterprise architecture and transition to the target enterprise architecture.

4.C.7. All CMS IT acquisitions shall comply with Department and Federal Acquisition Regulations and utilize CMS standard contracting vehicles in accordance with established acquisition criteria. Contracts awarded to support system development or system integration efforts should be modular, performance-based, and require EVM reporting, integrated baseline reviews, and an adequate level of maturity of organization processes in accordance with the Software Engineering Institute (SEI) Capability Maturity Model Integration[®] (CMMI[®]), as appropriate.

4.C.8. The use of prototypes or pilots shall be considered for large, expensive IT investments/projects where there is major uncertainty about proposed processes, procedures, or supporting information. Where prototypes are acquired as part of the planning process, prototypes must be reported as full acquisitions.

4.C.9. All Major IT investments and/or high-risk IT projects shall be subject to IV&V review at any time during the life cycle of the IT investment/project.

4.C.10. All implemented CMS IT investments/projects shall obtain appropriate authority to operate in a CMS-approved production environment.

4.D. IT Investment Evaluation

The CMS IT Investment Management and Governance process is not complete until IT investments/projects have been implemented and assessed as to whether they succeeded in delivering the benefits, products and/or services that were intended at the start. Post-implementation performance measurement allows CMS to determine the success of the IT investment/project once it becomes operational or goes into production.

4.D.1. A Post-Implementation Review shall be performed no later than one year following the production implementation of each IT investment/project to determine if the IT investment/project delivered the anticipated benefits and results. Actual investment cost, schedule, and performance shall be evaluated against original and latest baselines and level of stakeholder and customer satisfaction to determine the degree of efficiency and effectiveness in meeting performance and financial objectives. The Post-Implementation Review measures the performance of the IT investment/project against the proposed outcomes to determine if subsequent investment action is appropriate.

4.D.2. A Post-Implementation Review shall be conducted for any IT investment/project canceled before going into operation for determining lessons learned and comparing actual versus expected results.

5. ROLES AND RESPONSIBILITIES

The following entities have responsibilities related to the implementation of this policy:

5.A. CMS Information Technology Investment Review Board (ITIRB)

The CMS ITIRB is responsible for the following activities:

- Implementing an IT strategic planning process that prioritizes and funds CMS IT investments from an Agency perspective, supported by all areas within the organization;
- Providing business-driven leadership to CMS' IT operations and development to ensure that CMS' IT resources are efficiently deployed to meet short-, medium-, and long-term business demand;
- Prioritizing CMS IT investments based on the benefit to the enterprise and making strategic and funding recommendations regarding CMS' IT capital investment portfolios to the CMS Chief Operating Officer (COO) and CMS Administrator, ensuring that CMS IT investments individually and collectively maximize mission and financial returns;
- Establishing the IT governance principles that CMS must abide by in the operation and development of CMS systems, including establishing the IT investment management structure for the pre-selection, selection, control, and evaluation activities comprising the CMS IT Investment Management and Governance process;

- Developing the enterprise-wide IT mission, IT vision, and IT goals for the Agency and aligning to Presidential, Departmental, and/or Administrative directives;
- Establishing the portfolio selection criteria and thresholds to ensure that optimal IT investment portfolios with manageable risks and returns are selected and funded;
- Assessing, from the narrow perspective of individual business owners as well as the broad perspective of corporate Agency leadership, whether the solutions proposed by the CMS CIO and CTO are appropriate within the context of the ITIRB's understanding of CMS business needs and priorities;
- Building CMS' IT Investment Portfolio, including developing the Agency's Operating Plan and formulating budget submissions for CMS IT investments based on HHS and CMS strategic goals and recommendations received from the CMS Executive Steering Committees (ESCs);
- Reviewing the performance of IT investments using established criteria and checkpoints in meeting cost, schedule, risk, and benefit expectations and taking corrective actions when expectations are not being met;
- Managing CMS' IT Investment Portfolio by improving IT accountability and cost containment through the consistent use of project management practices, including regular reporting on performance metrics;
- Approving exceptions to established CMS IT Investment Management and Governance policy, processes, procedures, standards and guidance;
- Comparing the results of implemented investments with the expectations that were set for them and developing a set of lessons learned that will be used for process improvement;
- Ensuring that each IT investment complies with HHS Capital Planning and Investment Control (CPIC) and other management policies (e.g., IT, financial, acquisition, enterprise architecture, and security);
- Reviewing unspent funds during the fiscal year to identify potential sources of money for IT investments/projects that may be a higher priority and need additional funds; and
- Recommending changes to HHS policies, processes, and procedures relevant to IT investment management.

5.B. CMS Executive Steering Committees (ESCs)

Each CMS ESC is responsible for the following activities:

- Reviewing and recommending IT investments within the particular ESC business area to ensure integration and alignment with CMS business goals and objectives, and to ensure that the proposed portfolio of IT investments in that particular business area meets CMS business requirements and helps achieve CMS' core mission and business functions at minimum cost and risk;
- Reviewing all competing requests for funding within the particular ESC business area during budget formulation activities, and prioritizing the IT investments/projects based on criteria established by the CMS ITIRB to develop a draft budget for the ESC

investment portfolio, including making recommendations for alternate funding or no funding;

- Approving cost, schedule, and performance baselines for all new, approved IT investments/projects and new baselines for existing investments/projects; and
- Reviewing status information for the IT investments/projects in the ESC investment portfolio, including milestones, risks, spending plan, and any other information deemed necessary to manage the portfolio, and making appropriate recommendations.

5.C. CMS Chief Information Officer (CIO)

The CMS CIO is responsible for the following activities:

- Ensuring that CMS' internal IT management, strategic planning, budget, acquisition and OIS resources function to meet the requirements of OMB Circular A-130, the Clinger-Cohen Act of 1996, Federal Information Security Management Act of 2002, and other applicable statutory and regulatory requirements and executive guidance;
- Being an active participant in all CMS IT strategic management activities, including CMS strategic and operational planning;
- Establishing and maintaining an IT Investment Management and Governance Program for CMS;
- Being an active participant in establishing CMS IT investment priorities throughout the CMS budget process;
- Identifying CMS IT investments that meet Department ITIRB review criteria;
- Prioritizing the CMS IT Investment Portfolio to maximize the return on the IT resource investment against CMS mission and goals, and advising the HHS CIO regarding relative priorities among CMS IT investments;
- Providing oversight and support for all CMS IT investments requiring IT investment management and governance;
- Reviewing and approving CMS IT Investment Management and Governance processes to ensure compliance with HHS and CMS policy; and
- Serving as a member of the Department's CIO Council and ITIRB, as well as chairing the CMS ITIRB.

5.D. CMS Chief Technology Officer (CTO)

The CMS CTO is responsible for the following activities:

- Setting the direction for CMS with regard to the use of IT;
- Establishing an Engineering Review Board (ERB) to review technical designs at key checkpoints during the lifecycle process to ensure that the technical designs are feasible and adhere to CMS architectural ("As Is" and "To Be") standards;

- Reviewing business process models, high-level technical design concepts/alternatives and CPIC reports coming before CMS and Department IT governance boards (e.g., ITIRB and ERB) to ensure that optimal technical solutions are pursued; and
- Providing guidance to CMS business owners, project managers, and system developers/maintainers regarding technical solutions and alternatives.

5.E. CMS Chief Enterprise Architect (CEA)

The CMS CEA is responsible for the following activities:

- Assigning and managing resources for enterprise architecture activities to support the CMS IT Investment Management and Governance Program;
- Overseeing the development of an enterprise architecture that will ensure that all IT investments/projects are aligned with business drivers;
- Providing guidance to CMS business components, project managers, and system developers/maintainers regarding enterprise architecture policies, processes, procedures, standards, and issues;
- Managing pre-selection activities, which include conducting initial investigations and assessments of candidate IT investments/projects and possible alternative solutions to support the business needs;
- Ensuring business process models are developed for all IT investments/projects;
- Reviewing business process models, high-level technical design concepts/alternatives, and CPIC reports coming before CMS and Department IT governance boards for FEA alignment and conformance with CMS and Department architectural policy and standards;
- Ensuring that proposed IT investments/projects are assessed against the existing and target business architectures and that selected IT investments/projects align with CMS and HHS Enterprise Architectures;
- Looking across the CMS enterprise and its key business functions to determine impacts on other systems, business operations, etc., and providing guidance in resolving cross-cutting business architecture issues;
- Identifying and recommending actions to eliminate gaps, unnecessary duplication, or incompatibilities among CMS business functions and/or programs;
- Reviewing and recommending solutions to enterprise architecture and cross-domain issues, leveraging existing Agency, Departmental, and inter-governmental solutions;
- Interfacing with CMS business components, OIS, and IT project managers and providing recommendations to the CMS ITIRB regarding business issues; and
- Ensuring that IT investments in operation are periodically evaluated to determine whether they should be retained, modified, replaced or terminated.

5.F. CMS Chief Information Security Officer (CISO)

The CMS CISO is responsible for the following activities:

- Developing and implementing an information system security training and orientation program in accordance with the requirements from the Federal Information Security Management Act (FISMA) of 2002;
- Developing, evaluating, and providing information about the CMS Information Security (IS) Program, and communicating CMS IS Program requirements and concerns to CMS management and personnel;
- Mediating and resolving systems security issues that arise between two CMS business components, CMS and other Federal organizations, or CMS and States or contractors;
- Coordinating and overseeing IS incident response and reporting IS incidents in accordance with the reporting procedures developed and implemented by Federal mandates, HHS, and CMS; and
- Assisting CMS business component Information Systems Security Officers (ISSOs) in developing local systems security.

5.G. CMS IT Investment Management & Governance Support Staff

The CMS IT Investment Management & Governance Support Staff is responsible for the following activities:

- Coordinating and integrating the CMS IT Investment Management and Governance Program, including ensuring effective development and implementation of CMS' IT Investment Management and Governance policy, processes, procedures, standards, and guidelines;
- Providing administrative and management support for the CMS IT Investment Management and Governance Program, including the CMS IT budget formulation, project execution, and evaluation processes;
- Serving as the principal contact and entry point for all new and proposed IT investments/projects;
- Assisting in the complete and proper documentation of CMS' business processes;
- Reviewing the business justification of every new IT investment/project and major enhancement from an architectural, technical, security, privacy, and acquisition perspective and ensuring compliance with CMS' IT Investment Management and Governance policy, processes, procedures, standards, and guidelines to support investment recommendations and decisions made by CMS' IT governance boards;
- Assigning an appropriate classification level to each proposed and/or approved CMS IT investment/project;
- Providing guidance and ongoing support to CMS business components, project managers, and system developers/maintainers in the planning, management, analysis, design,

development, testing, implementation, operations, maintenance, and disposition of IT investments/projects;

- Reviewing technical designs to determine if functional requirements are being implemented in the appropriate system, using the appropriate methodologies, in a technically feasible and sound manner, and in accordance with CMS standards;
- Reviewing and recommending solutions for technical architecture issues, leveraging existing Agency, Departmental, and inter-governmental solutions;
- Monitoring the performance of selected IT investments/projects and alerting the ESCs and ITIRB of issues relevant to their investment funding decisions;
- Establishing and maintaining a repository for CMS IT investment data that will enable effective IT investment selection/reselection, implementation, and evaluation decision-making;
- Reporting information about CMS' IT Investment Portfolio to HHS, OMB, and GAO;
- Reviewing all IT statements of work and products/services acquisition forms (i.e., HHS-393, Credit Card Obligation, Supplemental Budget Request, and Inter/Intra-Agency Agreements) and matching requested acquisitions against the appropriate spending plan prior to submission to the Office of Financial Management for obligation of funds; and
- Obtaining, documenting, and demonstrating the levels of experience and training appropriate for the IT investment/project being managed and/or system being developed.

5.H. CMS Business Component Leadership

Senior leadership within the CMS business components is responsible for the following activities:

- Prioritizing every IT investment/project in their business area according to the criticality of the business needs of the IT investment/project relative to other component needs;
- Providing justification to the CMS ITIRB that the business needs driving the component's IT investments/projects are important enough to warrant funding; and
- Submitting an integrated response to the annual budget call letter providing information on all of the component's new IT projects and updating information on all existing investments to support the budget formulation process and the creation of the annual CMS Operating Plan.

5.I. CMS Business Owners

CMS Group Directors or Deputy Group Directors who have the primary business needs that are or will be addressed by CMS IT investments/projects are referred to as CMS Business Owners, and are responsible for the following activities:

- Complying with the requirements of this policy for IT investment planning for current and future fiscal years;

- In consultation with the System Developer/Maintainer and OIS, developing an order of magnitude estimate of costs and benefits that may be realized by IT investments/projects prior to investment selection, as well as full life cycle costs for all required services or items as appropriate (e.g., contractor services, data and database administration, processing capacity, storage, computer off-the-shelf (COTS) products, telecommunications, infrastructure support, information security, IV&V, etc.);
- If required, accurately completing an Exhibit 300 and/or other information to support the investment selection/funding decision;
- Ensuring that CMS investments/projects meet performance, cost, and schedule goals;
- Defining, validating and endorsing the business needs, business process models, and requirements documentation for CMS investments/projects;
- Analyzing business processes to identify business risks and ensuring that those risks are mitigated appropriately;
- Ensuring CMS IT investments/projects comply with prescribed enterprise architecture standards and receive approval for architectural compliance by the CMS CEA;
- Participating in user acceptance testing to validate system requirements are met;
- Certifying that CMS information systems fully comply with FISMA security requirements and ensuring appropriate security measures and supporting documentation are maintained; and
- Working with the CMS CEA and OIS to periodically review and evaluate the IT investments in operation to determine whether they should be retained, modified, replaced or terminated.

5.J. CMS Project Managers

CMS Project Managers are responsible for the following activities:

- Ensuring that CMS project staff and contractors comply with the requirements of this policy for day-to-day management of CMS-selected IT investments/projects;
- Ensuring that all appropriate business stakeholders and technical experts are involved throughout the life cycle of an IT investment/project;
- Planning, organizing, controlling, and leading IT investments/projects to successful completion by accomplishing approved cost, schedule, and performance baselines;
- Communicating regularly with management in the sponsoring business component and in OIS on the needs, risks, and progress of IT investments/projects;
- Confirming or reevaluating anticipated milestones and cost estimates for the fiscal year based on the final approved budget and developing an acquisition/spending plan that outlines all intended purchases for the current fiscal year;
- Managing and implementing CMS IT investments/projects in a disciplined manner, using recognized project management practices, and adhering to CMS requirements and

guidance as applicable and at an appropriate level of detail and oversight commensurate with the cost, risk, and schedule of the investment/project;

- Providing an EVM Performance Measurement Baseline (PMB) and any changes to the PMB (including rationale and driving factors leading to the new EVM PMB) for IV&V and/or approval by the appropriate ESC and/or the CMS ITIRB, if required;
- Reporting on a timely basis any significant anticipated baseline variation along with a Corrective Action Plan (CAP) or re-baselining proposal, as appropriate; and
- Conducting an annual operational analysis for each steady state IT investment.

5.K. CMS System Developers/Maintainers

CMS System Developers/Maintainers are responsible for the following activities:

- Ensuring that CMS information systems meet all established requirements and are developed/maintained in accordance with CMS system development life cycle, technical architecture, accessibility, security, and data policies, procedures, and standards;
- Developing and implementing investments/projects to fulfill the business requirements and meeting schedule performance goals;
- In consultation with the CMS business owners, providing accurate and timely investment data, EVM and other project data when requested (e.g., completing CMS IT budget request documentation, maintaining business case documentation in the CMS and HHS portfolio management tools, and ensuring updated cost, schedule, and performance information is provided) to enable effective portfolio decisions and tradeoffs made by CMS, HHS, OMB, and Congress;
- Working with CMS business owners, project managers, and OIS to determine the level of detail required for prescribed deliverables and reviews based on the specific circumstances of the individual projects;
- Enabling authorized access to information within CMS information systems in accordance with CMS policies, procedures, and standards;
- Implementing required controls for CMS information systems and attesting to the successful completion of the appropriate technical certification evaluations;
- Supporting CMS business owners in the fulfillment of security certification and accreditation activities and the development of required security documentation; and
- Improving on or correcting information security deficiencies and assisting CMS business owners in developing appropriate corrective action plans.

6. APPLICABLE LAWS/GUIDANCE

6.1. LAWS

The following laws are applicable to this policy:

- **Privacy Act of 1974, as amended (5 U.S.C. 552a)** requires that agencies balance their need to maintain information about individuals with the rights of individuals to be protected against unwarranted invasions of their privacy stemming from federal agencies' collection, maintenance, use, and disclosure of personal information about them.
- **Federal Manager's Financial Integrity Act (FMFIA) of 1982 (P.L. 97-255)** requires ongoing evaluations and reports of the adequacy of the systems of internal accounting and administrative control.
- **Chief Financial Officers (CFO) Act of 1990 (31 U.S.C. 3512 et seq.)** establishes a leadership structure, provides for long-range planning, requires audited financial statements, and strengthens accountability reporting.
- **Government Performance and Results Act of 1993 (GPRA - 1993)** establishes the foundation for budget decision-making to achieve strategic goals in order to meet agency mission objectives.
- **Federal Acquisition Streamlining Act of 1994, Title V (FASA V) (1994)** requires agencies to establish cost, schedule, and measurable performance goals for all major acquisition programs, and achieve on average 90 percent of those goals. OMB policy for performance-based management is also provided in this section. If an IT investment falls out of tolerance (failure to meet 90 percent of cost, schedule, or performance goals), FASA gives the Agency head the authority to review, and if necessary, terminate the IT investment.
- **Paperwork Reduction Act of 1995 (PRA)** requires agencies to perform information resource management activities in an efficient, effective, and economical manner.
- **Federal Financial Management Improvement Act (FFMIA) of 1996** provides consistency of accounting by agencies from one fiscal year to the next and establishes uniform accounting standards throughout the Federal Government.
- **Clinger-Cohen Act of 1996 (CCA)** requires agencies to use a disciplined capital planning and investment control (CPIC) process to acquire, use, maintain, and dispose of IT. The purpose of the CCA is to improve the productivity, efficiency, and effectiveness of federal programs through improved acquisition, use, and disposal of IT resources.
- **Health Insurance Portability and Accountability Act (HIPAA) of 1996 (P.L. 104-191)** is designed to protect confidential healthcare information through improved security standards and federal privacy legislation.
- **Government Paperwork Elimination Act of 1998** develops procedures for the use and acceptance of electronic signatures by executive agencies.
- **Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. § 794 (d)), as amended by the Workforce Investment Act of 1998 (P.L. 105-220), August 7, 1998** requires agencies to give disabled employees and members of the public access to information that is comparable to the access available to others.
- **Federal Information Security Management Act (FISMA - 2002)** requires agencies to integrate IT security into their capital planning and enterprise architecture processes at

the agency, conduct annual IT security reviews of all programs and systems, and report the results of those reviews to OMB.

- **E-Government Act of 2002 (P.L. 107-347)** requires agencies to develop performance measures for implementing E-Government. The Act also requires agencies to support Government-wide E-Government initiatives and to leverage cross-agency opportunities to further E-Government. In addition, the Act requires agencies to conduct and submit to OMB, Privacy Impact Assessments for all new IT investments administering information in identifiable form collected from or about members of the public.

6.2. REGULATIONS AND GUIDANCE

The following regulations and guidance are applicable to this policy:

- **President's Management Agenda** addresses Strategic Management of Human Capital, Competitive Sourcing, Improved Financial Performance, Expanded Electronic Government, Budget, and Performance Integration.
- **Executive Order 13011, July 17, 1996**, highlights the need for executive agencies to significantly improve the management of their information systems.
- **OMB Circular A-11, Preparation and Submission of Budget Estimates**, instructs agencies on the preparation and submission of budget estimates and budget execution; details the requirements of the budget process and preparation/submission of strategic plans and annual performance plans; addresses planning, budgeting, and acquisition of capital assets; and provides performance measures on management of physical and financial assets.
- **OMB Circular A-76, Performance of Commercial Activities**, requires that activities performed by the Federal government that are identified as commercial in nature will be subject to competition.
- **OMB Circular A-94, Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs**, provides general guidance for conducting benefit-cost and cost effectiveness analyses and specific guidance on the discount rates to be used in evaluating Federal programs whose benefits and costs are distributed over time.
- **OMB Circular A-109, Major Systems Acquisitions**, establishes policies for acquiring major systems. Major systems are defined as those programs that are critical to fulfilling an Agency mission, entail the allocation of relatively large resources, and warrant special management attention.
- **OMB Circular A-123, Management's Responsibility for Internal Control**, and the statute it implements, the **Federal Managers' Financial Integrity Act of 1982, revised December 21, 2004**, provides guidance to Federal managers on improving the accountability and effectiveness of Federal programs and operations by establishing, assessing, correcting, and reporting on management controls.
- **OMB Circular A-127, Financial Management Systems, December 19, 1984**, prescribes policies and standards for executive departments and agencies to follow in developing, operating, evaluating, and reporting on financial management systems.

- **OMB Circular A-130, Management of Federal Information Resources, November 30, 2000**, establishes policies for the management of federal information resources to include procedural and analytical guidelines for implementing specific aspects of the Circular.
- **OMB Circular A-130, Section 8b**, establishes additional requirements for enterprise architectures, planning and control of information systems and technology investments and performance management. Agencies must develop, implement, and use a capital programming process to develop their capital asset portfolio.
- **OMB Memorandum M-97-02, Funding Information Systems Investments, October 25, 1996**, establishes the decision criteria with respect to the evaluation of major information system investments.
- **OMB Memorandum M-00-07, Incorporating and Funding Security in Information Systems Investments, February 28, 2000**, reminds agencies of OMB's principles for incorporating and funding security as part of agency IT systems and architectures and of the decision criteria that will be used to evaluate security for information systems investments.
- **OMB Memorandum, M-03-22, OMB Guidance for Implementing the Privacy Provisions of the E-Government Act of 2002, September 30, 2003**, provides guidance on implementing the privacy provisions of the E-Government Act of 2002.
- **OMB Memorandum M-04-19, Information Technology (IT) Project Management (PM) Qualification Guidance, July 21, 2004**, identifies IT investment systems requiring qualified Project Managers and requirements for certification of Project Managers.
- **OMB Memorandum, M-04-24, Expanded Electronic Government (E-Gov) President's Management Agenda (PMA) Scorecard Cost, Schedule and Performance Standard for Success, August 23, 2004**, provides additional information on the President's Management Agenda (PMA) Expanded Electronic Government (E-Gov) initiative and the standard for success concerning cost.
- **OMB Memorandum M-04-25, FY 2004 Reporting Instructions for the Federal Information Security Management Act, August 23, 2004**, describes the integration of security and capital planning through the plan of action and milestone (POA&M) weakness mitigation process.
- **OMB Memorandum, M-05-23, Improving Information Technology (IT) Project Planning and Execution, August 4, 2005**, identifies steps agencies must take for all new major IT investments, on-going major IT developmental investments, and high-risk IT investments to better ensure improved execution and performance as well as to promote more effective oversight.
- **Federal Enterprise Architecture Consolidated Reference Model Document, Version 2.0 (FY08 Budget Formulation) June 2006**, builds a comprehensive business-driven blueprint of the entire Federal government. The FEA consists of a set of interrelated "reference models" designed to facilitate cross-agency analysis and the identification of duplicative investments, gaps and opportunities for collaboration within and across agencies.

- **HHS IT Policy for Enterprise Architecture, HHS-OCIO-2005-0003.001, January 10, 2006**, outlines related roles and responsibilities for ensuring compliance with legislative and executive level guidance on EA.
 - **HHS OCIO Policy for Information Technology (IT) Capital Planning and Investment Control (CPIC), HHS-OCIO-2005-0005.001, December 30, 2005**, establishes the policy, guidance, and responsibilities for performing IT CPIC processes throughout the Department of Health and Human Services.
 - **HHS OCIO IT Policy for Earned Value Management (EVM), HHS-OCIO-2005-0004.001, December 30, 2005**, establishes the policy for EVM within the Department of Health and Human Services and incorporates EVM as a fundamental element of HHS CPIC and investment portfolio management oversight.
 - **CMS Information Security Policy, CMS-OA-POL-SEC01, September 10, 2003**, establishes the high-level policy for the CMS Information Security Program as required by the FISMA.
 - **CMS Policy for the Information Security Program, CMS-CIO-POL-SEC02, May 2005**, provides the details of the CMS Information Security Program.
 - **CMS Integrated IT Investment & System Life Cycle Framework, March 2005, as amended**, provides a comprehensive set of policies, processes, procedures, artifacts, reviews, resources, and standards that prescribe CMS' requirements and guidance for IT investment and system life cycle management.
 - **CMS Policy for Capability Maturity Model Integration (CMMI), December 2006**, establishes the requirements for CMS IT contractors to possess an adequate level of maturity in their organizational processes that is in accordance with the SEI CMMI®.
-

7. INFORMATION AND ASSISTANCE

Contact the Director of the Enterprise Architecture and Strategy Group (EASG) within OIS for further information regarding this policy.

8. EFFECTIVE DATE/IMPLEMENTATION

This policy becomes effective on the date that CMS' CIO signs it and remains in effect until officially superseded or cancelled by the CIO.

9. APPROVED

/s/

5/17/2007

Julie C. Boughn
CMS Chief Information Officer and
Director, Office of Information Services

Date of Issuance

10. ATTACHMENTS

There are no documents that currently augment this policy.

GLOSSARY

Automated System

A configuration of hardware and software infrastructure, applications, and associated documentation, either custom designed or commercial off-the-shelf (COTS) software, or combination thereof, that automates the activities of collecting and/or accessing data or information and performing logical computations in support of CMS' processes.

Candidate IT Investment/Project

A potential new IT investment/project that has been identified by a CMS business component, which is being analyzed from a business and enterprise architecture perspective for possible investment selection and funding by the CMS ITIRB.

Capability Maturity Model Integration (CMMI[®])

An accepted, global best practice for the management and delivery of quality software services. CMMI[®] is a process improvement approach that provides organizations with the essential elements of effective processes. It can be used to guide process improvement across a project, a division, or an entire organization. CMMI[®] helps integrate traditionally separate organizational functions, set process improvement goals and priorities, provide guidance for quality processes, and provide a point of reference for appraising current processes.

CMS IT Investment Management and Governance Program

An organized set of functions, activities, services, and processes undertaken by CMS in order to carry out its responsibilities with regard to IT investment management and governance as required by law, regulation, and/or executive guidance.

CMS IT Investment Portfolio

The sum total of all of CMS' individual IT investments that have been approved for funding and/or support.

Development/Modernization/Enhancement (DME) Cost

The program cost for new investments, changes or modifications to existing systems to improve capability or performance, changes mandated by the Congress or agency leadership, personnel costs for project (investment) management, and direct support. [OMB Circular No. A-11]

Earned Value Management (EVM)

A project (investment) management tool that effectively integrates the investment scope of work with schedule and cost elements for optimum investment planning and control. [OMB Circular No. A-11]

Enterprise Architecture (EA)

A management engineering discipline presenting a comprehensive view of the enterprise, including strategic planning, organizational development, relationship management, business process improvement, information and knowledge management, and operations.

EA consists of models, diagrams, tables, and narrative, which together translate the complexities of the enterprise into simplified yet meaningful representations of how the enterprise operates (and intends to operate). Such operations are described in logical terms (e.g., business processes, rules, information needs and flows, users, locations) and technical terms (e.g., hardware, software, data, communications, and security standards and protocols). EA provides these perspectives both for the enterprise's current or "as is" environment and for its target or "to be" environment, as well as a sequencing plan that charts the journey between the two.

EA development, implementation, and maintenance are basic tenets of effective IT management. Managed properly, architecture can clarify and help optimize the interdependencies and interrelationships among an organization's business operations and the underlying IT infrastructure and applications that support these operations.

Exhibit 300

An annual document required by OMB, which refers to the requirements described in Section 300 of the OMB Circular A-11. The information provided in the Exhibit 300 justifies new or continued funding for a “Major” IT investment/project by demonstrating a direct connection to the President’s Management Agenda, the HHS Strategic Goals, the applicable HHS Operating Division Strategic Plan, positive return on investment, sound acquisition planning, risk mitigation and management planning, realistic cost and schedule goals, measurable performance benefits, and adherence to architecture, security, and privacy standards.

Federal Enterprise Architecture (FEA)

A business-based framework developed by OMB to identify opportunities to simplify processes and unify work across the agencies and within the lines of business of the Federal government in order to transform the Federal government into one that is citizen-centered, customer-focused, results-oriented, and market-based and to maximize technology investments to better achieve mission outcomes.

Information System

A discrete set of information technology, data, and related resources, such as personnel, hardware, software, and associated information technology services organized for the collection, processing, maintenance, use, sharing, dissemination or disposition of information. [OMB Circular No. A-11]

Information Technology (IT)

Equipment or interconnected systems that are used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information. The term includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services), and related resources. [OMB Circular A-130]

Integrated Baseline Review (IBR)

An internal inspection led by the project management team to verify that the PMB is in place, together with a realistic budget, to accomplish all planned work. The IBR includes an evaluation of the PMB for realism and inherent risks. When contractor resources are involved, the IBR provides a forum through which the government’s team gains a sense of ownership and understanding that EVM has been appropriately established for the project. An IBR may be used in place of an independent validation of the project baseline.

IT Investment

An expenditure of money and/or resources for IT or IT-related products and services involving managerial, technical, and organizational risk for which there are expected benefits to the organization's performance. These benefits are defined as improvements either in efficiency of operations or effectiveness in services.

IT Project

A temporary endeavor undertaken to create a unique information technology product, service, or result (e.g., an automated system). An IT project should have specific starting and ending dates, well-defined objectives and constraints, established responsibilities, and a budget and schedule. An IT project may be self-contained or may be part of a larger project. An IT project further refers to a project that uses, collects, manipulates, transfers, stores, or automates information. To determine if a project is considered an IT project, there are four main questions to answer:

1. Does the project require the collection or receipt of data, or the storage of data in a database?
2. Does the project generate data that is used by another system or entity, or that is made available to people through the Internet?
3. Does any part of the project involve automating all or part of a process, or improving all or part of a process by moving to newer technology?
4. Does the project take raw data and turn it into information for analysis or decision-making?

If the answer is yes to any of these questions, then the project is considered an IT project and is subject to the CMS IT Investment Management & Governance process.

Life Cycle Cost

All costs relating to an IT investment/project from initial planning to projected operational costs in the out-years throughout the expected lifetime of the IT investment/project.

Major IT Investment/Project

An IT investment/project 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.

Mixed Life-Cycle Investment

An investment that has DME and steady state aspects. 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. [OMB Circular No. A-11]

Non-Major IT Investment/Project

An IT investment/project that has been selected by the CMS ITIRB for funding that does not meet the criteria of a Major IT Investment/Project.

Performance Measurement Baseline (PMB)

The time-phased budget plan against which project performance is measured.

Steady State Cost

Maintenance and operation costs at current capability and performance level including costs for personnel, maintenance of existing information systems, corrective software maintenance, voice and data communications maintenance, and replacement of broken IT equipment. [OMB Circular No. A-11]

Unfunded IT Investment/Project

A viable endeavor from a business and enterprise architecture perspective that is not currently approved by the CMS ITIRB for funding, but which may be classified as a Major or Non-Major investment/project in the future if funding becomes available and is approved by the ITIRB at a later date.