



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

# CMS Policy for IT Investment Management

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## 1. PURPOSE

This document codifies the policy that has been followed by the Centers for Medicare & Medicaid Services (CMS) for selecting and managing information technology (IT)<sup>1</sup> investments.

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## 2. BACKGROUND

The Office of Information Services (OIS), headed by CMS's Chief Information Officer (CIO), is responsible for developing and managing CMS's IT investment management process to provide a structured process for the selection, development, and implementation of IT investments. It is the intent of CMS to implement an IT investment management process that complies fully with the requirements of the Clinger-Cohen Act of 1996, and related legislation and OMB guidance (OMB Circular A-130). Clinger-Cohen requires Federal agencies to strengthen their IT management processes in order to maximize the mission-benefit derived from IT investments, and to improve mission performance and service to the public. A key goal of the Clinger-Cohen Act is for Federal agencies to have a process in place to ensure that IT projects are implemented at acceptable costs, within reasonable time frames, and are contributing to tangible, observable improvements in mission performance. The Government Information Security Reform Act (GISRA) of 2000 places additional responsibilities on government CIOs to strengthen their systems security efforts and to integrate systems security into their IT investment management processes.

In addition to the legislative requirements, the increasingly rapid pace of change in business objectives and technology evolution requires that CMS manage its IT investments wisely. Information technology (IT) is a key enabler for supporting major CMS business responsibilities. Industry analyses highlight the high rate of failed IT investments, with the most commonly cited causes being poor planning and ineffective management processes.

CMS's management process attempts to bring together best practices from multiple disciplines, including the following:

- project management and financial management (including return-on-investment and risk analyses, earned value management),
- architecture and standards compliance,
- acquisition management (performance-based contracting), and
- systems development (including requirements management, configuration management, quality assurance, independent testing, and independent verification and validation) to provide a structured methodology for the selection, development, and implementation of CMS's IT investments. CMS's goal is to manage IT investments wisely, to maximize the

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<sup>1</sup> **Information Technology (IT)** is defined under legislation and Federal guidance as equipment or interconnected systems that are used in the automatic acquisitions, 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.

program benefit from these investments, and to improve mission performance and service to our beneficiaries.

In 1997, the Office of Information Services (OIS) in CMS began developing an IT investment management process to meet the specific obligations of the Clinger-Cohen Act, OMB guidance (OMB Circular A-130), and CMS's own needs for more effective management processes. The investment management process is built on the conceptual framework laid out in GAO's February 1997 *Assessing Risks and Returns: A Guide for Evaluating Federal Agencies' IT Investment Decision-making*.

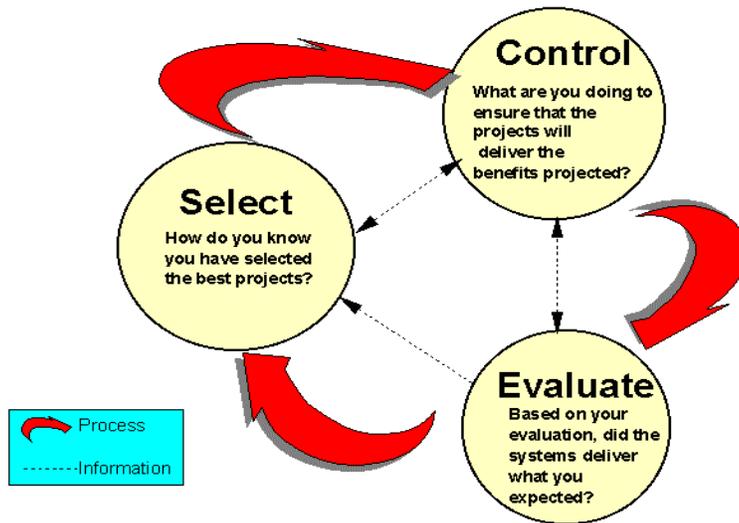


Figure above courtesy of the GAO at: [www.gao.gov/policy/itguide/overview.htm](http://www.gao.gov/policy/itguide/overview.htm)

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### 3. SCOPE

IT investments are assigned a classification level based on the nature and sensitivity of the project. This classification permits CMS to focus the appropriate level of management oversight and scrutiny on the project. These four classification levels are as follows:

- Level A Ongoing, baseline projects, usually related to the infrastructure, that support core business functions (e.g., hardware/software maintenance, and data communications and/or network operations). Often referred to as "door-openers."
- Level B Projects that are single-year hardware or software purchases; ongoing systems maintenance of existing systems; and development or enhancement projects under \$100,000.

- Level C Multi-year software development or enhancements over \$100,000; complex or large purchases; and large hardware or network integration activities that can be broken down into phases.
- Level D Projects that represent major investments exceeding \$2.5M in 1 year or \$10M over 5 years are of high visibility/sensitivity to key stakeholders, or drive forward a mission critical business function.

There are a number of IT projects that do not require direct funding since they are supported by in-house resources. These ("in-house") projects, while not explicitly subject to CMS's IT investment review process, are subject to the same management review and control principles that govern IT investments outlined in this document.

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## **4. POLICY**

All CMS IT investments are subject to review and approval by CMS's IT Investment Review Board (ITIRB). Currently the Financial Management Investment Board (FMIB) serves as CMS's ITIRB. The FMIB is responsible for developing the CMS's fiscal Operating Plan each year, based on the overall budget allocated by Congress. CMS's CIO and the Office of Information Services have the principal responsibility for supporting the ITIRB decision-making and investment management processes.

### **4.A. SELECT**

#### **4.A.1 Business Case Analysis**

Effective FY2001, all new level B, C & D projects must complete a Business Case Analysis, which will serve as the basis for the ITIRB decision of whether to approve the proposed investment. The objective of the Business Case Analysis is to provide sufficient understanding, appropriate to the size of the investment, about the estimated scope, cost, risks, and schedule of the proposed IT investment to enable an informed investment decision. Specific analyses that are to be completed as part of the Business Case Analysis include the following:

- Current environment/state;
- Business needs, impact on other projects or business processes, and documentation of requirements;
- Analysis of alternatives--based on appropriate criteria such as risks, costs and benefits (return-on-investment), and schedule;
- Technical strategy and compliance of proposed alternative with CMS's IT architecture;
- Acquisition strategy; and
- Project schedule.

## **4. A.2 Investment Approval**

Only those proposed investments that are shown to meet the following criteria will be approved by the CMS ITIRB:

1. Aligned with strategic CMS business objectives
2. Positive return on investment (as determined by analysis of projected costs and benefits)
3. Acceptable level of risk, with appropriate risk mitigation strategy
4. Acceptable technical strategy, compliant with CMS's IT architecture
5. Acceptable acquisition strategy.

## **4.B CONTROL**

### **4. B.1 Investment Management Phase**

The purpose of the management processes required in this phase is to ensure that the project, once approved by CMS's ITIRB, is managed and implemented in a structured manner, using sound management practices and ensuring involvement by business stakeholders and technical experts throughout the systems development lifecycle. The corollary objective of this phase is to ensure that appropriate management action is taken to address investment performance issues relative to scope, budget, or schedule. Each approved level C & D investment must ensure the following:

1. Compliance of the proposed solution with the CMS IT architecture
2. Compliance with sound systems development life-cycle processes (project planning and management, requirements management, configuration management, quality assurance, testing, contractor management, etc.)
3. Compliance with systems security standards and requirements
4. Compliance with applicable Federal requirements concerning collection, storage, and sharing of data (including computer matching program requirements)
5. Continued viability as assessed by compliance with project costs, schedule, and performance measures. All approved level C & D investments will be subject to ongoing monitoring to ensure that potential problems that may result in additional costs, slippage in schedule, scope changes, or quality issues are identified and addressed as early as possible.

## **4.C EVALUATE**

### **4.C.1 Post-Implementation Assessment**

Once the investment has moved into the implementation/operations/maintenance stage of its life-cycle, it will be subject to an evaluation of how well the investment achieved the business objectives identified during the Business Case Analysis phase (or as subsequently modified). The focus of this post-implementation assessment is to measure the performance of the

investment against the proposed outcomes, to determine if subsequent investment action is appropriate.

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## **5. ROLES AND RESPONSIBILITIES**

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

### **5.A. IT Investment Review Board**

The Financial Management Investment Board (FMIB) serves as the CMS IT Investment Review Board. The FMIB is comprised of senior-level executive managers from across CMS. The FMIB is responsible for developing CMS's fiscal Operating Plan each year, based on the overall budget allocated by Congress. The FMIB makes decisions regarding IT investments (as well as recommendations on non-IT budget issues).

### **5.B. Chief Information Officer (CIO)**

CMS's CIO (the Director of the Office of Information Services) is responsible for managing the investment management process for CMS, consistent with current legislation, OMB guidance, and HHS policy. Various components within the Office of Information Services have responsibilities that support CMS's IT investment management process, including support for the ITIRB decision-making process:

- Overall investment planning and management support: CIO Planning, Management, and Support Group (PMSG) serves as the principal contact/intake point for all new and proposed IT projects; provides direct support to the FMIB in its ITIRB decision-making role; coordinates review for Business Case Analyses; conducts ongoing oversight and monitoring of approved IT investments; coordinates post-implementation assessments; coordinates with staff from the Assistant Secretary of Management and Budget on IT budget and investment issues; and is responsible for coordinating and integrating the overall investment management process.
- IT architecture development and compliance: PMSG, supported by the CIO Technical Advisory Board--comprised of the Deputy CIO and representatives from the regional consortia and the major centers/offices in CMS
- Systems development life-cycle processes (such as requirements management, configuration management, quality assurance, independent testing, etc.): PMSG
- Security standards development and compliance: Security and Standards Group
- Capacity planning and infrastructure/technical support: Technology Management Group
- Data and database administration: Enterprise Databases Group

### **5.C. CIO's Technical Advisory Board (CTAB)**

The CTAB, on behalf of the CIO, is responsible for reviewing the technical solution proposed for an IT investment and certifying that the technical design is in compliance with the approved CMS IT architecture.

### **5.D. IT Council**

The IT Council--comprised of representatives designated by the CMS centers, offices, and consortia--and serves in an advisory role to the CIO on IT investment management and governance policy development and in developing the CMS IT strategic direction.

### **5.E. Supervisors and Managers**

Supervisors and managers are responsible for ensuring that appropriate staff have been trained in the investment management process and understand their responsibilities under this process. They are also responsible for identifying ongoing and proposed investments as information technology investments and complying with the CMS IT investment management policy described in this document.

### **5.F. Project Owners/Managers**

The project owner/manager for each IT investment project is responsible for the day-to-day management of the investment, and for compliance with the requirements of the CMS IT investment management process, including providing all required documentation to support the initial investment decision and to monitor ongoing project performance.

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## **6. APPLICABLE LAWS/GUIDANCE**

The following laws and guidance are applicable to this Policy:

- Clinger-Cohen Act (Information Technology Management Reform Act of 1996) - P.L. 104-106, Division E
- Government Performance and Results Act (GPRA)
- Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35)
- Government Information Security Reform Act (GISRA) of 2000
- OMB Circular A-130, November 30, 2000
- HHS Policy Circular, *IRM Policy for Capital Planning and Investment Control*, January 8, 2001

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## 7. EFFECTIVE DATES

This policy is effective for all new investments approved subsequent to October 1, 2000, and for existing investments as noted in the policy.

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## 8. INFORMATION AND ASSISTANCE

Staff within the Office of Information Services, particularly within the CIO Planning, Management, and Support Group (410-786-2980), is available to provide assistance in the implementation of this policy. In addition, the following resources are available (either in hard-copy or via the CMSNet--"Our Systems/Information Technology") to assist IT project owner/managers:

- *CMS IT Investment Management Process Guide*
  - *Business Case Analysis Development Guide* (including sample statement of work and sample BCA)
  - *Integrated IT Investment Management Roadmap*
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## 9. APPROVED

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/s/

Gary C. Christoph, Ph.D.  
Chief Information Officer

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12/05/01

Date of Issuance