

CIO POLICY TRANSMITTAL 06-003

Classification No.: CIO 2120 (formerly 2100.3)

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Capital Planning and Investment Control (CPIC) Program Policy for Management of Information Technology (IT) Investments

I. Purpose:

The Environmental Protection Agency (EPA or Agency) strives to ensure that the process for managing the Agency's investments in information technology is consistent with Federal statutes, regulations, and policies and supports EPA's System Life Cycle (SLC) and Enterprise Architecture (EA) requirements. In order to maintain consistency and fulfill mandates of the Clinger-Cohen Act of 1996, this document establishes the policy for assuring that information technology (IT) resources are invested and managed to achieve high value outcomes at acceptable costs. It also addresses the prescribed "select/control/evaluate" approach to managing IT investments.

II. Policy:

It is the policy of EPA to select IT investments that support the Agency mission and align with its business needs, manage such investments with the goals of minimizing risks and maximizing returns, and evaluate the investments' results. The pursuit of these objectives is conducted by the Agency in accordance with applicable:

- a. statutory requirements, such as the Clinger-Cohen Act of 1996;
- b. circulars, procedures, standards, and guidelines established by Office of Management and Budget (OMB) and National Institute of Standards and Technology (NIST);
- c. EPA policies, procedures, standards, and guidelines; and
- d. industry best practices.

Therefore, in order to attain high value outcomes at acceptable costs:

1. EPA Offices identify business solutions with IT component(s) that promote the current Administration's and the Agency's strategic priorities, fall within EPA's Enterprise Architecture, and support the Office's progress, performance, and business functions. The Offices

must submit to the Agency's Chief Information Officer (CIO) through the Office of Environmental Information (OEI), Office of Technology Operations and Planning (OTOP), Mission Investment Solutions Division (MISD), a proposal to invest funds into such IT component(s) within the submitting Office's budget. IT investment proposals shall be prepared based on:

- a. the Clinger-Cohen Act;
- b. EPA's CPIC requirements established herein;
- c. circulars, procedures, standards, and guidelines established by OMB and NIST (including but not limited to OMB's Circular A-11);
- d. EPA's procedures, standards, guidelines; and
- e. industry best practices.

(Details of the OMB and EPA CPIC procedures, standards and guidelines can be found on EPA's CPIC website at: <http://intranet.epa.gov/cpic/index.htm>.)

2. The CIO, in conjunction with the Chief Financial Officer (CFO), Senior Procurement Executive (SPE) and senior program officials on EPA's Quality and Information Council's (QIC) Information Investment Subcommittee (IIS), evaluates the Agency's need for potential business solutions that contain major IT investment(s) on the basis of alignment of the IT portfolio with EPA's Enterprise Architecture and with the Administration's priorities, and selects those investments recommended for funding in the Agency's annual budget to the Administrator.
3. Selection of investments is based on quantitative and qualitative criteria, including evaluation criteria established by OMB guidance and EPA criteria addressing Agency priorities and sound business practices. (For the detailed description of the selection process of IT investments at EPA, please refer to section "The Select Phase" in *CPIC Procedures – OMB's Exhibit 300* that can be found at: <http://intranet.epa.gov/cpic/laws.htm>.)
4. As selected investments are being developed, they are overseen and reviewed via a structured managerial control process. For each IT investment, EPA establishes a performance measurement baseline for cost, schedule and performance goals. For major investments, the reasonableness of performance measurement baselines is validated via independent review, and the Agency employs OMB-mandated Earned Value Management System (EVMS) to monitor, track, and control their development. These measures serve to ensure that:

- a. the investments meet Federal and EPA requirements that support mission and business goals and objectives;
- b. the investments progress in accordance with planned costs, schedule, and performance baselines; and
- c. modifications and adjustments are made to projects accordingly.

(For the detailed description of the Agency's managerial controls during the development of IT investments, please refer to section "The Control Phase" in *CPIC Procedures – OMB's Exhibit 300* that can be found at: <http://intranet.epa.gov/cpic/laws.htm>.)

5. Once investments have been fully implemented, or if investments are cancelled prior to implementation, they are evaluated – the actual versus expected results are compared. This is done to:
 - a. assess the investment's impact on mission performance;
 - b. identify any changes or modifications to the investment that may be needed; and
 - c. revise the CPIC process, based on lessons learned, to improve management oversight of major IT investments.

(For the detailed description of the post-implementation evaluation process of IT investments at EPA, please refer to section "The Evaluate Phase" in *CPIC Procedures – OMB's Exhibit 300* that can be found at: <http://intranet.epa.gov/cpic/laws.htm>.)

III. Audience:

The audience for this policy includes the Chief Information Officer (CIO), Chief Financial Officer (CFO), Senior Information Officials (SIO), Information Management Officers (IMO), project managers of major and non-major IT investments, and any person involved in IT capital planning.

IV. Background:

EPA, like other Federal agencies, has been dealing with increasing challenges in managing IT. The uncertainty of IT funds and staff to meet competing demands; the advent of e-commerce and electronic government; the growing need for more stringent security planning and control; and the continuous demand to produce products and services more quickly and cheaply are just a few of the factors that require us to use and manage our IT investments wisely.

In 1997, following the enactment of the Clinger-Cohen Act, EPA developed a process for reviewing its major IT investments. The process was developed using the requirements of the Clinger-Cohen Act, and guidance from the General Accounting Office and the Office of Management and Budget. Each year since that time, EPA has continually improved its CPIC process to make it more structured, predictable, robust and strategic. Specific actions and process improvements include creating a senior management IT investment review board to oversee and select IT projects; defining selection criteria; and automating the process to facilitate proposal preparation and updating, continuous monitoring of investments, and information sharing via a central repository. Additional improvements will be communicated through the IT Capital Planning and Investment Control procedures that support this policy.

V. Roles and Responsibilities:

EPA Administrator: Approves continuation of IT investments that are outside of acceptable cost, schedule, and/or performance variance.

Assistant Administrators, Associate Administrators, Staff Office Directors, and Regional Administrators, General Counsel, and Inspector General: Ensure, in their areas of responsibility, compliance with this policy.

Chief Information Officer (CIO): Works with the Quality and Information Council (QIC) to establish the criteria, threshold levels, and formats for submission. On the advice of the QIC and QIC's IIS, the CIO reviews and selects the investments to be funded, recommends proposals to the CFO for investment consideration during the Agency's budget formulation process, and oversees continued implementation of the accurate EVM system to monitor and evaluate the ongoing performance of IT investments. Additionally, the CIO, in consultation with the CFO, SPE, and senior program officials on the IIS, reviews and monitors compliance with this policy. The CIO reviews the requests for waivers from this policy, and approves or disapproves such requests as appropriate.

Chief Financial Officer (CFO): Provides, in consultation with the CIO and other senior program officials, the appropriate review, selects investments to be funded, and monitors compliance with this policy to

ensure that the requirements of the OCFO Act of 1990, OMB Circular A-127, and other related statutory and regulatory authorities are met.

Quality and Information Council (QIC): Under the chairmanship of the CIO, addresses and resolves intra-Agency cross-media, cross-program, and interdisciplinary information technology/information management and related policy issues.

QIC's Information Investment Subcommittee (IIS): Advises and assists the QIC on all matters pertaining to information investment management. The IIS supports the QIC in making recommendations to the CIO on the appropriateness of information investments, and monitors the Agency's IT investments from inception to completion throughout the Select, Control, and Evaluate phases of the CPIC program.

Deputy Chief Information Officer for Technology (DCIOT): Establishes and publishes the CPIC procedures, standards and guidelines based on the Clinger-Cohen Act, and OMB and Agency CPIC requirements established herein. The DCIOT reviews requests for waivers from the CPIC procedures and standards, and approves or disapproves them as appropriate for fulfillment of the EPA CPIC policy and Agency mission. (For the waivers from this policy, please refer to the Chief Information Officer's Roles and Responsibilities in this section.)

Senior Procurement Executive (SPE): Ensures that acquisition strategy considerations for each project are appropriate, and investment proposals are consistent with the EPA acquisition policies and procedures.

Chief Architect (CA): Provides direction to the development and maintenance of the EPA's Enterprise Architecture, and ensures its coordination with the Federal Enterprise Architecture framework and EPA's information management collaborations with state, local, and tribal partners. Supports the IIS's selection of the technological enhancements to be developed in the Agency by ensuring that the proposed IT investments are compliant with the EPA's Enterprise Architecture.

Senior Information Officials (SIO): Coordinate the development of the information resource investment proposals within their respective offices, and monitor the implementation of information resource investments to ensure that the information technology used and managed by their organization supports its business needs and mission and helps to achieve EPA's strategic goals.

Information Management Officers (IMO): Support the SIOs in development of the information resource investment proposals within their respective offices, and monitor the implementation of information resource investments.

Senior Resource Officials (SRO): Participate in the development of the information resource investment proposals within their respective offices, and monitor the implementation of information resource investments to ensure effective and appropriate resource management.

Senior Budget Officers (SBO): Support the IMOs, SIOs, and SROs in the process of development of the information resource investment proposals within their respective offices, and monitor the implementation of information resource investments. Ensure the alignment of resources between the Agency's authoritative budget source and the IT investments' business cases.

Project Managers (PMs): Develop and maintain viable, appropriate and achievable CPIC business cases that support EPA's goals for information management and enable the Agency's senior management to select, review, and evaluate IT investments. Additionally, provide day-to-day management of the investments, and ensure that the investments advance in an orderly fashion through the CPIC process. Must be qualified in accordance with Federal and Agency requirements for IT project management, and possess documented knowledge and skills as prescribed by the qualification guidance.

VI. Definitions:

Business Solution: Process and/or product that corrects past deficiencies, enhances current processes, or realizes future opportunities, and thus serves to close the Agency's performance gaps.

Control Phase [of CPIC Process]: Process to ensure that IT initiatives are developed and implemented in a disciplined, well-managed, and consistent fashion; that project objectives are being met; that the costs and benefits were accurately estimated; and that spending is in line with the planned budget. This promotes the delivery of quality products and results in initiatives that are completed within scope, on time, and within budget.

Enterprise Architecture: A strategic information asset base that provides a definition of the mission, the information and technologies

necessary to perform the mission, and transitional processes for implementing new technologies in response to changing mission needs.

Evaluate Phase [of CPIC Process]: Process and guidance on comparing actual to expected results once an IT investment has been implemented. Provides an understanding of how to evaluate “mature” systems for their continued effectiveness in supporting mission requirements, and to evaluate the cost of continued support or potential retirement and replacement.

Information Technology (IT): Applied computer systems, both hardware and software, and often including networking and telecommunications, usually in the context of a business or other enterprise. Often the name of the part of the enterprise that deals with all things electronic.

Investment: Within the context of this policy, an IT project, system, initiative, and/or acquisition.

Information Technology (IT) Portfolio: Collection of the Agency’s IT investments.

Performance Management Baseline: Budget plan against which contract performance is measured. It is the schedule for expenditure of the resources allocated to accomplish program scope and schedule objectives.

Select Phase [of CPIC Process]: Process EPA uses to ensure that IT investments are chosen that best support the Agency’s mission and align with EPA’s approach to Enterprise Architecture.

System Life Cycle: Complete time span of an IT system from the origin of the idea that leads to the creation of the system to the end of its useful life. The life cycle is divided into discrete phases with formal milestones established as points of management control.

VII. Recertification

Date:

Three years from issuance date.

VIII. Waivers:

Waivers to the requirements of this policy and supporting procedures and standards must be requested by the project manager and concurred by the applicable Senior Information Official. The policy waivers must be approved by the Chief Information Officer. Waivers of procedures or standards must be approved by the Deputy Chief Information Officer for Technology.

IX. Additional Information:

Supersedes: IT Capital Planning and Investment Control (CPIC) Policy 2100.2A1

For further information about this Policy, please contact the EPA Office of Environmental Information, Office of Technology Operations and Planning, Mission Investment Solutions Division.

X. Authorities:

The links to the documents listed below can be found at:
<http://intranet.epa.gov/cpic/laws.htm>.

1. Clinger-Cohen Act of 1996 (formerly the Information Technology Management Reform Act (ITMRA)) requires the head of each agency to implement a process for maximizing the value and assessing and managing the risks of the agency's IT acquisitions.
2. Paperwork Reduction Act of 1995 (PRA) requires agencies to use information resources to improve efficiency and effectiveness of their operations and fulfillment of their mission.
3. Federal Acquisition Streamlining Act of 1994 (FASA) requires agencies to define cost, schedule and performance goals for federal acquisition programs and to ensure that these programs remain within prescribed tolerances.
4. Government Performance and Results Act of 1993 (GPRA) requires agencies to set goals, measure performance, and report on their accomplishments.

5. Chief Financial Officers (CFO) Act of 1990 focuses on the need to significantly improve the financial management and reporting practices of the federal government. Having accurate financial data is critical to understanding the costs and assessing the returns on IT investments.
 6. OMB Circular A-130 “Management of Federal Information Resources” incorporates the PRA and provides guidance concerning information dissemination and sharing, planning, training, security, standards, privacy, and records management.
 7. OMB Circular A-11 “Annual Budget Guidance” provides unified budget guidance and emphasizes that estimates for information systems reflect the Agency’s commitment to planning and are consistent with the Clinger-Cohen Act.
 8. OMB Circular A-127 “Financial Management Systems” prescribes policies and standards for agencies to follow in developing, operating, evaluating, and reporting on financial management systems.
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