EPA IT/IM DIRECTIVE
PROCEDURE

Directive No: CIO 2120-P-02.6

Issued by the EPA Chief Information Officer,
Pursuant to Delegation 1-19

Capital Planning and Investment Control Procedures

1. PURPOSE

This document describes the Environmental Protection Agency's (EPA) Information Technology (IT) Capital Planning and Investment Control (CPIC) process and procedures. It documents steps EPA staff should follow to manage IT investments, comply with internal and external reporting requirements, and ultimately assist the Office of Management and Budget (OMB) and the EPA Chief Information Officer (CIO) with oversight and informed decision making while also providing transparency to the general public. The EPA's goal is to achieve optimal balance of Agency IT investments at the lowest cost with the least risk, while addressing the strategic needs of the Agency, optimizing scarce resources, identifying gaps and inaccuracies in IT spending, and ensuring mission and business goals are achieved.

2. SCOPE

The EPA CPIC program's mission is to guide EPA IT investment managers effectively and efficiently through CPIC, ensuring optimal support to the EPA mission.

The procedure applies to EPA IT investments and IT projects throughout their entire life cycle, regardless of funding source, whether owned and operated by EPA or operated on behalf of EPA. All EPA organizations are expected to manage their IT investment portfolios in accordance with applicable EPA investment category requirements (e.g., Major, Medium, Lite, and Small/Other).

3. AUDIENCE

The procedures apply to EPA and contractor personnel participating in the acquisition, development, management, and disposal of EPA IT systems.

4. AUTHORITY

The links to the documents listed below can also be located:
https://work.epa.gov/cpic/laws-and-guidance

- *Clinger-Cohen Act (CCA) 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.

- *E-Government Act of 2002* – aims to enhance the management and promotion of Electronic Government services and processes by establishing a Federal CIO within the OMB, and by establishing a broad framework of measures that require using Internet-based IT to enhance citizen access to government information and services, and for other purposes.

- *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.

- *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.

- *Federal Acquisition Regulation (FAR)* – the primary regulation for use by all executive agencies in their acquisition of supplies and services with appropriated funds.

- *Government Performance and Results Act of 1993 (GPRA)* – requires agencies to set goals, measure performance, and report on their accomplishments.

- *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.

- *EPA Acquisition Regulation (EPAAR)* – the EPA's final rule based on Presidential Memorandum 3-9-09, "Scientific Integrity" to strengthen scientific integrity at the Agency. It requires EPA contractors to adhere to the Agency's scientific integrity policy if they engage in scientific activities as part of their EPA contracts to ensure their scientific products are of the highest quality, objective, and rigorous.

- *Electronic Industries Alliance (EIA) 748, Standard for Earned Value Management Systems (EVMS), Revision D* – contains a set of guidelines that defines the requirements an EVMS must meet and is the governing document for its application.

- *EIA-748-D Intent Guide, Earned Value Management Systems* – provides additional insight into the EIA-748 Standard for EVMS.

- *Federal Information Security Management Act of 2002 (FISMA)* – requires agencies to integrate IT security into their capital planning and enterprise architecture processes, conduct annual IT security reviews of all programs and systems, and report the results of those reviews to the OMB.

- *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.

- *OMB Circular A-11, Preparation, Submission, and Execution of the Budget* – provides unified budget guidance and emphasizes that estimates for information systems reflect the agency's commitment to planning and are consistent with the CCA.
- *OMB Circular A-123, Appendix D Compliance with the Federal Financial Management Improvement Act (FFMIA) of 1996* – defines new requirements for determining compliance with the FFMIA in order to transform a compliance framework so that it will contribute to efforts to reduce the cost, risk, and complexity of financial system modernizations by providing additional flexibility for Federal agencies to initiate smaller-scale financial modernizations as long as relevant financial management outcomes (e.g., clean audits, proper controls, timely reporting) are maintained.
- *OMB Memorandum M-10-27, Information Technology Investment Baseline Management Policy* – provides policy on the establishment, management, and changes to investment baselines.
- Federal Information Technology Acquisition Reform Act (FITARA) – This Act requires CIO involvement in IT budget formulation, IT planning, IT acquisition, and IT delivery. As part of this new role, the CIO will conduct the annual FITARA IT Portfolio reviews (ITPRs) to ensure that all programs and the CIO are meeting FITARA requirements.
- 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.
- Information and Communication Technology (ICT) Final Standards and Guidelines (36 CFR Part 1193 and 1194, January 18, 2017).
- Section 255 of the Communications Act of 1934, as amended by the Telecommunications Act of 1996 – 36 C.F.R. Part 1193
- Earned Value Management System (48 CFR § 52.234-4) – EVMS requirements related to federal acquisitions.
- Compliance with EPA policies for information resources management (48 CFR § 1552.211-79).
- Foundations for Evidence-Based Policymaking Act of 2018 (Evidence Act) – broadly requires federal agencies to develop evidence to support policymaking.

5. PROCEDURE

5.1 Process Overview

The CPIC process is a dynamic management process in which proposed and ongoing initiatives are continuously monitored throughout their life cycles. Initiatives are evaluated

both to assess the impact on future proposals and benefit from any lessons learned. The process links budget formulation and execution and is focused on EPA missions as well as achieving specific program outcomes.

The Portfolio Management Division (PMD) CPIC Team facilitates and supports the EPA's CPIC. For questions about CPIC policy, processes, and procedures, contact CPIC@epa.gov. While the CPIC Team is responsible for the enterprise and portfolio process and guidance, each program office must maintain its own investment planning and management functions to fulfill CPIC goals and objectives. Prior to submitting documentation to the CPIC Team to meet OMB reporting requirements, all investment justification documentation must be reviewed and approved by the Program Office's Senior Information Official (SIO).

OMB mandates annual reports, including the Major IT Business Case (MITBC) and the Agency IT Portfolio Summary/Details (AITPS/D). The CPIC reporting cycle is made up of two (2) annual submissions of the AITPS/D to OMB: 1) Initial OMB Submission (typically occurs early fall, around September); and 2) President's Budget Submission (typically occurs winter/early spring). For EPA and OMB planning purposes, both submissions must include information regarding Prior Year (PY), Current Year (CY), and Budget Year (BY), as indicated in the table below.

Table 1. Annual Submissions

Year	OMB Submission (i.e., Initial Submission)	BY2025 Example
PY	Enacted Budget	FY2023 Enacted Budget
CY	Previous BY President's Budget Submission (e.g., BY2024)	FY2024 President's Budget Submission
BY	OMB Submission (i.e., Agency Request)	FY2025 OMB Submission
Year	President's Budget Submission	BY2025 Example
PY	Actual Obligations	FY2023 Actual Obligations (or FY2023 Enacted)
CY	President's Budget Submission for the Current Year (Likely/Enacted)	FY2024 President's Budget Submission (or FY2024 Enacted if Congress has appropriated funds more than 30 days prior to this submission)
BY	President's Budget Submission Request for the Budget Year	FY2025 President's Budget Submission

While OMB guidance categorizes IT investments as Major, Non-Major, Migration, Funding Transfer, or Standard, the EPA also utilizes an internal categorization, particularly for the Major and Non-Major investments, which is outlined in more detail in Directive CIO 2120.6, *Capital Planning and Investment Control Program Policy*.

Each category of IT investment has its own criteria, threshold, and reporting requirements. Major IT investments are required to provide regular monthly performance updates via the Federal IT Dashboard (ITDB) so OMB can conduct management and operational performance assessments, while Non-Major Investments typically report twice annually.

To meet OMB's requirements, the EPA utilizes the General Services Administration's (GSA's) IT Portfolio Management tool, Folio, to document and report its IT investment data to OMB. Folio was specifically developed in coordination with the Federal ITDB. The CIO provides final certification of all investment data before it is submitted to the Federal ITDB.

5.2 CPIC Phases

At the highest level, the CPIC process is a circular flow of EPA's IT investments through four (4) sequential phases:

- **Pre-Select** – The EPA assesses an idea for a new investment to determine if it supports the Agency's strategic goals and objectives. New IT investments should continue into the Agency-wide "Select" Phase based on strategic alignment, high-level business need justification, determination that the investment is not a duplicate or redundant investment, and other indicators as indicated by the program office.

- **Select** – Program/Project Managers (P/PMs) compile information to support a detailed proposal assessment. Executive decision makers assess proposed investment support of EPA's strategic and mission needs. Investment analyses are conducted and the Investment Review Board (IRB) chooses the IT investment(s) that best support the mission of the organization, adhere to Federal and Agency security requirements, and align with EPA's Enterprise Architecture (EA) approach.

- **Control** – Through timely oversight, quality control, and executive review, the EPA ensures that IT initiatives are developed and implemented in a disciplined, well-managed, and consistent manner.

- **Evaluate Phase** – Actual results of the implemented projects are compared to expectations. This is to assess the project's impact on mission performance,

identify any needed project changes or modifications, and revise the investment management process based on lessons learned. Mature or steady state systems are assessed to ascertain their continued effectiveness in supporting mission requirements, evaluate the cost of continued maintenance support, assess potential technology opportunities, and consider retirement or replacement options.

Each CPIC phase must be completed before beginning a subsequent phase. The SIO overseeing each of their respective investments (and associated system(s)) is responsible for attesting to the current status of that investment (including phase) in accordance with OMB reporting requirements (monthly for Major investments and bi-annually for all other investments). These phases are structured using a set of common elements which are intended to provide a consistent, predictable flow and coordination of activities within each phase:

- **Purpose** – Describes the phase objective;
- **Entry Criteria** – Describes phase requirements and thresholds;
- **Process** – Describes the type of justification, planning, and review activities that will occur in the phase; and
- **Exit Criteria** – Describes actions necessary for proceeding to the next phase.

These elements are defined by OMB's Major IT Business Case (MITBC) template. Contact the CPIC Team (cpic@epa.gov) for the most recent version of the OMB MITBC and EPA guidance.[1]

5.2.1 Pre-Select Phase

Item	Description
Purpose	To assess a proposed investment to determine if the investment supports EPA's strategic goals and objectives. In the subsequent Select phase, the EPA CIO working with Chief Information Security Officer (CISO) will only review IT investments that have been pre-selected by the program offices through their respective processes.

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[1] OMB guidance for the MITBC process may vary each fiscal year (FY) so EPA produces a question-by-question guidance document and distributes it to MITBC preparers. It contains more specific "how-to guidance" for each OMB MITBC question than these procedures and can be found on the OMS-EI intranet. The current version of the OMB Major IT Business Case can be found by accessing the current version of Circular A-11, via the following link: https://www.whitehouse.gov/omb/information-for-agencies/circulars/. Current versions of the EPA's CPIC guidance can be located via the following link: https://work.epa.gov/cpic/laws-and-guidance.

Entry Criteria	Prior to entering the Pre-Select Phase, investments must have a defined business mission need that is anticipated to include an IT component.
Process	This phase can happen anytime, but generally occurs when an IT investment portfolio is being compiled. Program offices must: • Conduct a review of the current and new investment lists within their IT portfolio to avoid redundancy. • Promote new investments through their program office for reviews, assessments, and recommendations, and then to the IRB for final approval. • Include determination the investment is not a duplicate or redundant, and other indicators. • Work with the Office of the Chief Financial Officer (OCFO) to establish an IT Code for the investment. • Submit a *CPIC Investment Request* to the CPIC Team for coordination and approval.
Exit Criteria	Prior to exiting the Pre-Select Phase, an IT code must be assigned to the new investment and the *CPIC Investment Request* must be submitted to the IRB for a major, medium, lite or small and other investment. In addition, the investment must be presented to and reviewed by the IRB and obtain IRB approval for the mission need and concept.

5.2.2   Select Phase

Item	Description
Purpose	The Program Office explains the solution and finalizes submission of the investment justification for IRB approval to comply with Agency and Federal planning and information requirements. The Program Office must demonstrate to the IRB this investment is the best use of Agency funds to fill the mission performance gap and should be included in the Agency's IT Investment Portfolio. The initial investment justification summarizes the proposed system, its goals and objectives, spending, security requirements, and its role in the Agency's EA. Proper planning, documentation, and review are critical to funding and also set success expectations for this solution and the Integrated Project Team (IPT) that manages it. For a Non-Major investment, the IPT should consist of an Information Management Officer (IMO) and a P/PM at minimum. Major

Item	Description
	investment IPTs must consist of the following members at minimum: • IT P/PM • Business Process Owner or Subject Matter Expert (SME) • Contracting Specialist • IT Specialist • IT Security Specialist The Program Office decides whether each member of the IPT should be assigned full time to the project. When the initial investment justification is approved, it will be the baseline by which to evaluate the progress and performance of the investment through the remainder of its life cycle.
Entry Criteria	All criteria must be met for entrance into this phase: 1. IRB approval obtained (during Pre-Select); 2. Gap in Program office mission success identified; 3. IPT established to analyze solutions to fill that gap; 4. IPT developed solutions for the entire life cycle of the investment; 5. Investment funding justification developed to propose the solution for funding; and 6. Project Sponsor obtained a funding commitment from the Office.
Process	Program offices must comply with the OMB AITPS/D investment process for all investments. Refer to the CPIC Policy Section 6 for information regarding the IT investment categories, their criteria, and associated reporting requirements. Table 1 below outlines required documentation. Program offices will work with the EPA Chief Architect (CA) to meet the System Life Cycle Management (SLCM) requirements. Information Security Officers (ISOs) within their respective offices should conduct detailed IT security analyses and review business cases for security requirements. The IRB will review the recommended investments, decide the investment categories, and select those that will be included in the IT Investment Portfolio. To obtain IRB approval, the investment owner must: 1. Submit the *CPIC Investment Request Form* to the IRB if it's a Major, Medium, Lite, or Small/Other investment; 2. Present the investment at IRB meeting; and

Item	Description
	3. Pass the SLCM Control Gate 1 and 2 reviews. The preparation of the investment justification is important, as it provides documentation that supports the later development of a more detailed investment justification.
Exit Criteria	Requirements to exit the Select Phase: 1. Completed list in Table 2; 2. Made presentation at IRB meeting; 3. Passed the SLCM Control Gate 1 and 2 reviews; and 4. Received approval from the IIRB to become part of the IT Investment Portfolio along with IRB recommended investment category. Projects not selected may be resubmitted for IRB approval at subsequent reviews. If system(s) that support the investment meet the Registry of EPA Applications and Databases (READ) qualifications, they must be registered within READ.

Table 2. Required Documentation by EPA Investment Category

EPA Investment Category	CPIC Investment Request Form to Document New Investment	Investment Justification Documents	OMB MITBC	OMB AITPS/D
Major	X	X	X	X
Medium	X	X		X
Lite	X	X		X
Small/Other	X	X		X

5.2.3 Control Phase

Item	Description
Purpose	The primary objective is to assess the performance of investments and facilitate effective management of all IT investments. The Control Phase,

Item	Description
	which is continuous, ensures acquisition, development, and implementation of investments are performed in a controlled manner, on schedule, and within budget.
Entry Criteria	Documented IRB approval is required for entry into the Control Phase; this validates the investments have been selected and approval for funding has been granted.
Process	During the Control Phase, planning, development, deployment, and operations and maintenance (O&M) activities must be documented. Ongoing monitoring and reporting throughout the investment life cycle are key to successfully achieving the benefits outlined in the investment justification documentation. Emphasis is placed on the Project and Funding Plan and investments should be closely tracked against various components identified in the Risk Management Plan. All investments are documented in Folio in accordance with OMB guidance. Although EPA usually selects new investments annually, the Control Phase is an ongoing activity which requires continuous monitoring of IT initiatives through the development and implementation life cycle. Periodic summary reviews will be conducted to focus on progress through development and implementation as costs and benefits change. Reviews also focus on schedule and performance goals being met; risks being minimized and managed; and whether the investment will continue to meet Agency goals and strategic needs. Depending on the outcome, decisions may be made to suspend funding or make future funding releases conditional on corrective actions. During this phase, investments are required to comply with both EPA internal reporting and OMB reporting requirements. The CPIC Team collaborates with EPA's senior leadership team and other investment stakeholders to provide governance and reporting requirements for investments in the Agency's portfolio. Investment stakeholders work closely with the CPIC Team during this phase. The CPIC Team provides guidance and support to ensure compliance with EPA and OMB requirements. See Table 3 for reporting requirements for investments in EPA's investment portfolio. Additional guidance is provided in CPIC Policy, Section 6.

Item	Description
	In order to request investment data for all reports in the Control Phase as shown in Table 3, the CPIC Team issues separate data calls to all stakeholders. Typically, the stakeholders enter the required performance updates in Folio and the CPIC Team analyzes the data, compiles and presents the report to Senior Management stakeholders for approval. Documented prior approval by Senior Management is required for all reports submitted to OMB. For information about the monthly ITDB submission process, see Table 4.
	While the IT Dashboard process is usually monthly, certain situations may require that the monthly ITDB process be cancelled. Below is a list of situations where the monthly IT Dashboard may be cancelled:
	- The ITDB is usually not submitted in September since the OMB Exhibit 300 submission is considered as an update to the ITDB as per OMB guidance. - The ITDB is not usually submitted in January due to the fact that Folio is not available to investment PMs while the OMB AITPS is prepared and submitted. - The ITDB may be cancelled due to other schedule conflicts as approved by the CIO and communicated by the CPIC Team.
Exit Criteria	None; all investments must eventually move from the Control Phase into the Evaluate Phase.

Table 3. CPIC Investment Reporting Criteria

Control Phase Report	Reporting Criteria
OMB MITBC	Annual BY report to OMB for all Major IT investments.
OMB AITPS/D (Initial)	Annual BY report to OMB for all IT investments.
OMB AITPS/D (President's Budget)	Amended Agency IT Portfolio report to OMB for all investments based on adjustments for the President's Budget.

Control Phase Report	Reporting Criteria
OMB Monthly ITDB Submission	Report monthly cost, schedule, risk, and operational performance to OMB for all Major IT Investments based on monitor and control of the BY.

Table 4. Federal Monthly ITDB Submission Process

Step	Day(s)	Process Step	Responsible Individual or Group
1	Continuous	Monitor CPIC Mailbox & troubleshoot issues	CPIC Team
2	1-2	Develop the ITDB data call and disseminate to P/PMs, IMOs, SBOs, and SIOs	CPIC Team
3	7	Update the investment data for each Major Investment	P/PM and alternate backup support staff
4	3	Submit Change Requests (CRs) and Baseline Change Events (BCEs), as needed	P/PM and alternate backup support staff
5	7	Respond to the ITDB data call via email and certify (via SIO concurrence statement) that updates have been made	SIOs, IMOs, P/PMs, and alternate backup support staff
6	4-5	Conduct data validation and work with investment teams and/or the system helpdesk to troubleshoot issues/errors	CPIC Team
7	4-5	Assess updated investment data and document findings	CPIC Team
8	2-3	Prepare the monthly ITDB package for submission and briefing to PMD and Office of Digital Services and Technical Architecture (ODSTA) leadership for their feedback and approval	CPIC Team

Step	Day(s)	Process Step	Responsible Individual or Group
9	1	Finalize ITDB package based on (ODSTA) and PMD feedback	CPIC Team
10	1-2	Submit finalized monthly ITDB package to CIO via email and/or briefing, if required	CPIC Team Lead
11	2-5	CIO provides feedback on CIO ratings/comments and approves or requests additional information/changes to submit package to OMB	CIO
12	2-3	CPIC team submits data to OMB	CPIC Team

5.2.4 Evaluate Phase

Item	Description
Purpose	As noted in the Government Accountability Office's (GAO) *Assessing Risks and Returns: A Guide for Evaluating Federal Agencies' IT Investment Decision-Making*, this phase "closes the loop" by comparing actuals against estimates to assess performance and identify areas to improve decision-making. This helps identify the investment's impact on mission performance, identify any changes or modifications that may be needed, and measure benefits to the Agency. This phase focuses on outcomes: • Whether the IT investment met its performance, cost, and schedule objectives; • If the investment continues to be effective in supporting mission requirements, accounting for the cost of continued maintenance support; and • If retirement or replacement of the investment should be considered.
Entry Criteria	An investment must be in the Control Phase before entering the Evaluate Phase.
Process	This is a continuous operational phase to evaluate the following:

Item	Description
	1. ***Major & Standard investment types*** – ratings by CIO and SIO which identify the level of risk inherent to the investment; 2. Recurring investment reviews conducted by the IMO and SIO; 3. Annual FITARA ITPRs; 4. IT security analyses and business case review for security requirements by ISO within their respective offices; 5. EA review of the investment for alignment with the EA Roadmap; 6. Support provided by the CPIC Team to the Senior IT Leaders (SITL) and other stakeholders in preparation for the monthly ITDB reporting to OMB; 7. Annual evaluation by the SITL and approval by the IRB of all Major investments in the EPA's portfolio in preparation for OMB MITBC submission; 8. Annual OMB Feedback on Major Investment as part of the AITPS/D President's Budget submission; 9. Alignment of investment artifacts with current investment performance; 10. Whether potential changes in the investment's criteria are needed; and 11. Periodic TechStat reviews, as necessary.
Exit Criteria	To exit the Evaluate Phase, at least one (1) of the following criteria must be met: 1. <u>Automatic Reversion to Control Phase</u> – the investment is meeting all performance goals and targets, performing as expected, and continues to enable services/business functions that meet program mission needs. 2. <u>Reversion to Select Phase</u> – significant deficiency has been identified with the system which must be re-engineered or re-architected. Re-approval during the Select Phase is necessary. 3. <u>Termination</u> – the Program Office or investment owner determines the investment has reached the end of useful life and must be retired. 4. <u>Consolidation</u> – the Program Office or investment owner has determined that the investment requirements, features or capabilities should be integrated into another existing investment, so the investment will be terminated, and its functionality will be moved to another investment.

5.2.5   TechStat

The EPA may implement internal TechStat (i.e., "T-Stat") review meetings between the IT program and the EPA CIO (with other senior leadership, as necessary) to resolve potential issues, risks, or other concerns before rising to the level where an external, OMB-led TechStat is required.

While any EPA employee can recommend the CIO establish an internal TechStat for a particular investment, recommendations should typically come from the CPIC Team, senior leadership, or programmatic staff intimately familiar with the investment. The CIO has the final authority to approve, implement, and lead internal TechStat reviews. Depending on the CIO's level of concern, TechStat meetings may be implemented weekly, monthly, or quarterly until the issues/risks/concerns are appropriately mitigated or resolved, at which point, the CIO will indicate the TechStat is complete.

5.3   New IT Investments

All new Major, Medium, and Lite IT investments must be documented and coordinated to the CPIC Team using the *CPIC Investment Request Form*. Use this form to address the following:

- Program office/point of contact (POC) information
- Request type (e.g., Establish a New Investment)
- Proposed Investment Name
    - o Provide in the "ACRONYM – Name" format
    - o For example: "CDX – Central Data Exchange"
- Brief description of the proposed investment
- Whether the new investment will be considered an EPA Mission or Standard investment
- Anticipated start and end years
- Associated Tower(s) and Cost Pool(s)
- Whether the investment is an enhancement to an existing system software
    - o Any existing 2-character Project Code(s)
    - o System Name(s)
- Funding
- Approvals

The form must be submitted to the following personnel in the order they are listed below for review and approval:
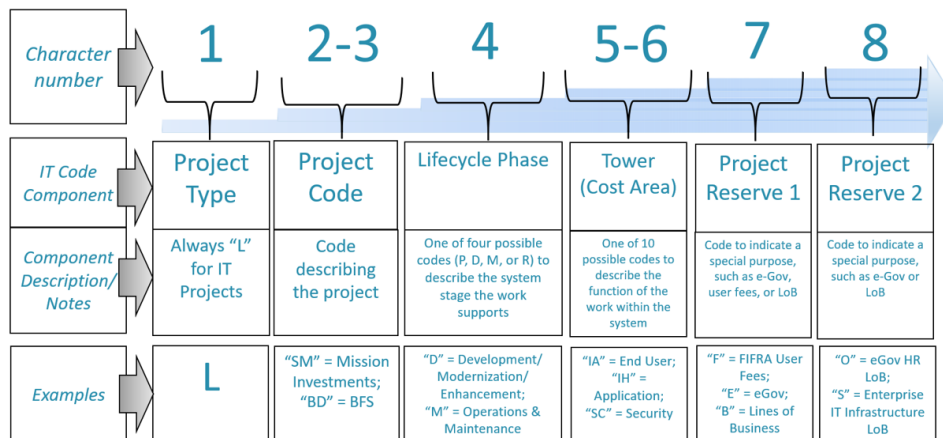
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1. P/PM
2. P/PM's Office Director
3. IMO
4. SBO
5. SIO
6. CPIC Team Lead
7. Office of Mission Support (OMS) ODSTA PMD Director

When formally approved, the CPIC Team (i.e., system administrators) will create the new investment in the EPA's IT Portfolio Management tool (i.e., Folio). When this process is complete, the CPIC Team will initiate the following sub-processes: 1) request IT codes; 2) request to update budget/financial systems.

5.3.1 Request IT Codes

An EPA IT Code is an eight (8) character accounting string consisting of six (6) components with specific purposes, including Technology Business Management (TBM), as outlined in the figure below. EPA uses the "site/project" field in the Agency's budget, financial, and feeder systems for IT code to capture IT-related costs. This field can also be identified as "job" in certain EPA financial systems. Each component of the IT code builds on the previous one to create a code specific to that system need.

Figure 1. IT Code Structure

Character number	1	2-3	4	5-6	7	8
IT Code Component	Project Type	Project Code	Lifecycle Phase	Tower (Cost Area)	Project Reserve 1	Project Reserve 2
Component Description/ Notes	Always "L" for IT Projects	Code describing the project	One of four possible codes (P, D, M, or R) to describe the system stage the work supports	One of 10 possible codes to describe the function of the work within the system	Code to indicate a special purpose, such as e-Gov, user fees, or LoB	Code to indicate a special purpose, such as e-Gov or LoB
Examples	L	"SM" = Mission Investments; "BD" = BFS	"D" = Development/ Modernization/ Enhancement; "M" = Operations & Maintenance	"IA" = End User; "IH" = Application; "SC" = Security	"F" = FIFRA User Fees; "E" = eGov; "B" = Lines of Business	"O" = eGov HR LoB; "S" = Enterprise IT Infrastructure LoB

Once the new investment is approved, the CPIC Team contacts OCFO for the two (2) character **Project Code** portion of the IT Code. The CPIC Team will then add the new Project Code to the customized field in the Folio system for tracking purposes and notify

the investment team (i.e., IMO, SBO and P/PM) as well as OCFO BFS BAS Support (ocfo-bfs_bas-support@epa.gov) to request this information is updated in the Budget Formulation System (BFS).

Since each program office identifies their needs differently, their SBO is responsible for contacting the OCFO Help Desk (OCFO-System-Help@epa.gov) to create the full eight (8) character IT Code, which includes the approved Project Code. When generated, OCFO will request approval from the PMD Director.

5.3.2   Request to Update Budget/Financial Systems and Data Repository

Three (3) systems require CPIC information regarding Investment Project Codes: 1) Compass Financials; 2) READ; and 3) BFS.

Compass Financials is an EPA information system which provides tools to manage, budget, and track expenditures, while READ acts as a data repository regarding EPA information resources, to include systems and applications. BFS enables EPA staff to formulate budgets, integrate budgets with strategic and annual performance plans, track financial actuals against established budgets, and model future payroll needs. After the CPIC Team receives the two (2) character Project Code, they will notify POCs to update READ and BFS. Once the new investment is input into Folio, the CPIC Team will notify READ POCs of the Unique Investment Identifier (UII) associated with the two (2) character Project Code. When the PMD Director approves the full eight (8) character IT Codes (as requested by the Investment Team and generated by the OCFO Help Desk), OCFO inputs that information into the Compass Financials System.

5.4   Investment Changes

Throughout the life cycle of every IT investment, changes occur (e.g., Major downgraded to Non-Major IT investment, eliminated, retired, consolidated, split, etc.). For the purposes of internal EPA portfolio management as well as OMB reporting requirements, change in investment status must be tracked, along with a description of the rationale for the change and associated impacts. Any change to investment status requires coordination with the CPIC Team and completion/approval of the CPIC Change in Investment Status Form. Contact the CPIC Team before submitting the form.

Pursuant to OMB requirements, investments being retired must continue to report for a period of three (3) consecutive years from the last year receiving funding. New investments, upgrades to Major investment(s), as well as splits and downgrades of Major investment(s) all require IRB approval. Additionally, all downgrades must continue to report as their original CPIC category (prior to the downgrade) for three (3) years. All

upgrades may report as the new EPA CPIC category immediately.

OMB change in investment status identifiers (as they appear in Folio) are listed below:

- 01: Upgraded from Non-Major to Major IT investment (e.g., EPA Medium IT investment is upgraded to a Major IT investment)
- 02: Downgraded from Major to Non-Major IT investment (e.g., Major IT investment is downgraded to a Medium IT investment)
- 03: Split into multiple investments
- 04: Consolidation of investments
- 05: Reorganization
- 06: Eliminated by funding
- 07: Eliminated by split
- 08: Eliminated by consolidation
- 09: Eliminated by reorganization
- 10: New
- 11: No Change in Status

5.4.1   Upgrades and Downgrades (01)

Upgrades and downgrades have to do with changes to the investment category based on CIO discretion or alignment with different criteria, as outlined in the CPIC Policy document. Changes from Non-Major to Major investments are required to be reported to OMB, but changes within EPA IT investment categories (e.g., Lite to Medium or Lite to Small/Other, etc.) are only required for internal EPA reporting. Like the creation of new investments, changes to Major investments do require IRB approval. Additionally, the EPA CPIC Program requires investments which have been downgraded continue to report for three (3) years as their original CPIC investment category. Upgrades of any investment categories assume the new EPA CPIC category immediately for reporting purposes.

5.4.2   Splits (03)

Single investments that have been split into multiple investments should use status identifier 03, must be included in the AITPS, and list the new UIIs in the "Current UII" field when reporting to OMB.

5.4.3   Consolidations (04)

Investments which have been consolidated (i.e., multiple investments combine into a single investment) should use status identifier 04 and must list their previous UII when reporting to OMB.

5.4.4   Reorganization (05)

New IT Standard investments should use status identifier 05.

5.4.5   Retirement (06-09)

Depending on the specific reason for their retirement, retired investments may use status identifier 06, 07, 08, or 09. Pursuant to OMB requirements, investments in the retirement phase must continue to report for a period of three (3) consecutive years from the last year receiving funding (i.e., PY, CY, and BY).

5.5   Earned Value Management (EVM)

As outlined in the [National Defense Industrial Association (NDIA)/Electronic Industries Alliance (EIA) standard 748](#) (the standard for Department of Defense (DoD) EVM programs), EVM is a project management tool and a component of risk management. It is intended to standardize progress and project performance reporting, which enables leadership to make comparisons and investment-level decisions. The EPA also recognizes this as the standard for its EVM programs.

EVM is required for Major IT investments when in development, modernization, and enhancement (DME) phases. Major investments in the preliminary design (i.e., planning) phase must have an established baseline with the appropriate Work Breakdown Structure (WBS) and use EVM when prototyping and testing to select the alternative. Major investments with any resources allocated to the Acquisition/Development phase must document EVM and be prepared to provide it upon request.

EVM implementation shall occur when sufficient investment definition is achieved (e.g., the Performance Measurement Baseline (PMB)) is achieved and the DME cost is equal to five percent (5%) or more of the total annual (i.e., fiscal year (FY)) budget. This includes steady state investments with a DME portion that equals or exceeds five percent (5%) of the total FY budget.

Elements of an EVM System (EVMS) include:

- WBS
- Organizational Breakdown Structures (OBS)
- Responsibility Assignment Matrix (RAM)
- Performance Measurement Baseline (PMB)

5.5.1   Performance Measurement Baseline (PMB)

Effective investment management requires integration of both contract cost and schedule elements. Schedules that result from this integration show the overall planned time required to accomplish projects and their activities. Assigning budgets to scheduled segments of work produces the PMB, which should be used for comparison with projected/actual performance.

The PMB is an important tool used by PMs and systems engineers during the technical assessment process to appraise a program's technical progress. It includes the undistributed budget, all summary level planning package budgets, and all control account budgets, but does not include management reserve. It establishes the contract level timed phased baseline against which contract level earned value metrics are computed. It establishes the scope, schedule, and budget targets for the program. The Integrated Baseline Review (IBR) establishes the PMB.

To determine schedule, consider the planned time required to accomplish the technical scope of the contract and available resources to execute the work. The schedule may be adjusted by leveling the resources to conform to the available budget, resource constraints, capacity of the work site, and other factors. It should cover all specified work and incorporate meaningful milestones in terms of technical requirements. Include forecasts of expected future progress (e.g., key milestones, activities, effects of resource constraints, etc.). Depending on the complexity of the program/project, it may be necessary to develop a master schedule with subordinate schedules to better identify actual technical progress.

The schedule baseline, progress, and estimated time to complete should be integrated with the financial view of the technical scope, including budgets and estimated cost to complete. If financial data is not available for integration with the schedule at a particular time, investment managers should implement a process to estimate costs.

The PMB should be established as early as possible in the project's lifecycle. Projects with a long lifecycle may be broken down into smaller segments with individual PMBs assigned to them. The PMB is required for the progress, performance measures, and/or project variances to be valid.

5.5.2   Integrated Baseline Reviews (IBRs)

An IBR is a joint assessment conducted by the government PM and the contractor to establish a mutual understanding of the project PMB. This understanding provides for an agreement on a plan of action to evaluate the risks inherent in the PMB and the

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management processes that operate during program execution. IBRs should be initiated no later than six (6) months after contract award, an interagency agreement (IAA) is reached, or a major modification occurs. They must occur before DME starts and before any rebaseline requests. When EVM is required, investment managers should use IBRs throughout the program/project lifecycle.

The IBR process includes:

1. The PM's assessment of their understanding of the risks (both government and contractor PMs);
2. Preparation for an IBR;
3. Execution of the IBR; and
4. Management (e.g., the source of on-going mutual understanding)

Completion of the IBR should result in the assessment of risk within the project baseline and the degree to which the following have been established:

1. Technical scope of work is included and consistent with authorizing documents (e.g., contract, modifications, statement of work (SOW), WBS, etc.);
2. Key project schedule milestones are identified and supporting schedules reflect a logical flow to accomplish the work (e.g., Integrated Master Schedule (IMS), detailed schedules, etc.);
3. Resources (e.g., budgets, facilities, personnel, skills, etc.) are available and adequate for the assigned tasks;
4. Tasks are planned and can be measured objectively relative to technical progress;
5. Rationales underlying the program are reasonable; and
6. Management processes support successful execution of the project

IBRs are conducted by the project team for the investment; however, additional subject matter experts (SMEs) may be included at the discretion of the PM and/or the SIO/IMO. Any qualified person, as determined by the SIO, who did not prepare the baseline can join the project team during the IBR process. The selection and rationale for who is involved in the IBR should be documented as part of the "Preparation for an IBR" phase.

If a contractor prepares a baseline for the contractor portion of the project, then an Integrated Project Team (IPT) could serve as the reviewing group for the IBR, with the contractor present to explain the baseline and its preparation. The IPT can be supplemented by federal or contract members because of their expertise.

For federally-prepared baselines, the IPT can conduct the IBR as long as the IPT includes members who were not responsible for preparing the baseline.

The SIO and/or IMO are responsible for:

1. Maintaining IBR-related documentation
2. Ensuring the PM and project team plan an IBR in accordance with DoD guidance and EPA procedures, and approve the overall methodology used for the IBR process
3. Ensuring the PM and the project team execute the IBR and report any major findings to the SIO with a mitigation strategy
4. Approve the results of the IBR with any mitigation actions and ensure the subsequent baseline is adjusted according to the IBR findings

5.5.3   Monitoring, Analysis, and Reporting

The [Federal Acquisition Regulation (FAR)](#) and [EPA Acquisition Regulation (EPAAR)](#) require contractors to provide PMs with monthly EVM data documenting cost, schedule, and performance of investments. PMs are responsible for reviewing these monthly reports and adjusting investment cost and schedule accordingly, as well as submitting the results to their management (i.e., SIO/IMO). Please note, for project planned fields that are updated after the project or its child activities have started over two (2) months beforehand, fields should be reverted back to their original values.

All investments reporting EVM should have a formally approved WBS, OBS, and PMB. These elements should be approved at the investment's program office level. The investment team must ensure all direct costs of work (contractor and federal employees) are allocated to the investment. PMs should plan to use the EPA's payroll system as the basis for these direct cost charges.

As of the date of this directive, there is no requirement for EVM reports to be submitted to the Federal ITDB; however, offices should be prepared to provide EVM documentation to OMB and/or EPA IT governance boards upon request within 10 business days.

5.5.4   Baseline Change Process

The baseline change process is an oversight mechanism for OMB to track significant changes to investments.

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If you make changes to baselined fields in the Folio system (identified by a red flag icon),
you must create a Baseline Change Event (BCE) to explain your changes to OMB for a
particular reporting period. Once the BCE is created, an EPA Folio Administrator (i.e.,
member of the CPIC Team) will link it with the relevant change request (CR) updates
when submitting to OMB. Baselined fields are typically found in the Projects and
Activities sections in Folio, and are related to planned cost, schedule, and scope.

Current baselined fields include:

1. Projects
   a. Project Start Date – Planned
   b. Project Completion Date – Planned
   c. Project Total Cost – Planned
2. Activities
   a. Info tab
      i. WBS field
      ii. Activity Name
      iii. Description
   b. Date(s) tab
      i. Planned Start Date (Pl)
      ii. Planned Completion Date (Pl)
   c. Cost(s) tab
      i. Planned (Pl) Cost
3. Performance Metrics
   a. Unit of Measure
   b. Agency Baseline Capability
   c. Prior Year (PY) Target
   d. Current Year (CY) Target
   e. Measurement Condition
   f. Reporting Frequency
   g. Actual Result

Please note these fields are baselined once they are established on the ITDB, but not
when they are submitted for the first time. Additionally, a BCE is required to "un-retire"
an investment (for instance, one that was previously retired from the ITDB).

Folio BCE options include:

1. Rebaseline (R)
   a. **R-Funding** – significant changes in funding level or availability of fund
   b. **R-Contracting** – significant change in contracting

     c. **R-Scope Change** – scope and objectives evolve due to incremental or iterative system development

     d. **R-Current Baseline Not Useful** – current baseline is no longer useful as a management tool

     e. **R-Other Reason** – other reason consistent with Agency policy and OMB memorandum M-10-27

2. <u>Replan</u> – adding or modifying detail within the overall cost and schedule goals
3. <u>Correction</u>

To create a BCE in Folio, go to the "Tools" menu under the Project's parent investment, select "Baseline Change Events" and use the four (4) required BCE fields to explain the reason for the change. Your EPA Folio Administrator (i.e., CPIC Team member) must grant you permission to create/edit BCEs or the link will not be viewable. Contact the CPIC Team at CPIC@epa.gov for any concerns or questions related to this process.

A rebaseline is a formal request to change an approved PMB. With the exception of routine corrections, all rebaseline CRs are reviewed and approved by the SIO, IIS, ODSTA/PMD, and CIO. Considerable effort should be made during the planning phase of the investment to account for all areas of the investment System Life Cycle (SLC) to avoid the need for continuous rebaselining.

Acceptable reasons for rebaselining include:

1. Significant change(s) in an investment's goals (i.e., scope, requirements, objectives, etc.) resulting from internal or external management decisions
2. Significant change in contract support
3. Significant change(s) in funding level or the availability of funds
4. Current baseline is no longer useful as a management tool for realistic performance measurement (e.g., variances are so high they lose meaning)

All rebaseline requests must clearly explain the reason(s) why the current plan (i.e., baseline) is no longer feasible and be submitted to the SIO for approval. The PM or Investment Manager should document the precise justification as well as revised investment description, milestones (including new cost and schedule goals), and summary of funding.

Once approved by the investment SIO, rebaseline requests should be sent to the CPIC Team at CPIC@epa.gov for PMD review and approval. Only once PMD approves will CRs be accepted, BCE aligned to the changes, and data updated on the Federal ITDB for the next submission period.

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6. ROLES AND RESPONSIBILITIES

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

Assistant Administrators and Regional Administrators, General Counsel, and Inspector General: Shall ensure, in their areas of responsibility, compliance with these procedures.

Chief Information Officer (CIO):
- Reviews all cost estimates of IT-related costs and ensures all acquisition strategies and acquisition plans that include IT apply adequate incremental development principles.
- Certifies that investments are adequately implementing incremental development consistent with OMB capital planning guidance.
- Reviews and approves funding reprogramming requests (i.e., shifting funds within an appropriation fund or account).
- Approves CPIC Policy and Procedures, ensuring Agency compliance with CPIC standards by providing guidance and tools to senior managers for program oversight. Assists senior agency officials with complex IT issues.
- Develops and maintains an Agency-wide information security program.
- Develops and maintains risk-based information security policies, procedures, and control techniques.
- Designates a Chief Information Security Officer (CISO) to carry out CIO directives as required by FISMA.
- Ensures IT training for agency staff and oversees IT security personnel. Designs, implements, and maintains processes for maximizing the value and managing the risks of IT acquisitions.
- On the advice of the IRB, the CIO shall review and select the investments to be funded, present proposed IT portfolios to the IRB, provide final portfolio endorsements and recommend proposals to the CFO for investment consideration during the Agency's budget formulation process.
- Coordinates with the Agency head and CFO to ensure financial systems are effectively implemented.
- The CIO, in consultation with the CFO, Senior Procurement Official (SPE), CISO and senior program officials on IRB, shall provide the appropriate review, monitor compliance with this policy, present, recommend, control and evaluate decisions and recommendations.
- The CIO will review the requests for waivers from this policy and grant the policy waivers whenever appropriate.

Chief Financial Officer (CFO):
- Shall provide, in consultation with the CIO and other senior program officials, the appropriate review and selection of investments to be funded and monitored for compliance with this policy.
- Coordinates with the Agency head and CIO to ensure financial systems are effectively implemented.

Investment Review Board (IRB): Advises and assists the CIO on all matters pertaining to IT investment management. The IRB supports the CIO in making recommendations on the appropriateness of IT investments and monitors the Agency's IT investments from inception to completion throughout the CPIC Program's Pre-Select, Select, Control, and Evaluate phases.

Senior Procurement Executive (SPE): Ensures that acquisition strategy considerations for each project are appropriate, investment proposals are consistent with EPA acquisition policies and procedures, and acquisition/procurement/contract management ensure optimal results.

Chief Architect (CA): The CA is responsible for leading the development, alignment and maintenance of the Agency's target Enterprise Architecture in conjunction with the SLCM Policy. EPA's SLCM Framework facilitates the identification, planning, and implementation of IT systems by integrating EA, CPIC, SLCM, and Security life cycles (see Figure 1 in the System Life Cycle Management Procedure). The CA shall certify that Solutions Architectures required for IT projects are compliant with the EA. EA is the discipline that synthesizes key business and technology information across the organization to support better decision-making. EA provides useful and usable information products and governance services to the end-user while developing and maintaining the current and target (to-be) architectures and transition plan for the organization. The information in the EA includes: results of operations, business functions and activities, information requirements, supporting applications and technologies, and security.

Senior Information Officials (SIO): SIOs shall work with IMOs, P/PMs, and other support staff to coordinate the development of IT investment proposals within their respective offices, monitor the implementation of IT investments to ensure the IT utilized and managed by their organization supports the business needs and mission to achieve EPA's strategic goals, and review and concur on waiver requests to the CPIC Policy and the CPIC Procedure. For a current listing of SIOs, refer to the EPA's IT/IM Governance Membership: CIO SAC, SIOs, IMOs & SITLs.

Information Management Officers (IMO IMOs shall work with SBO(s), P/PM(s), and other support staff to support the SIO(s) with development of the IT investment

proposals within their respective offices and monitor the implementation of IT investments and review and concur on waiver requests to the CPIC Policy and the CPIC Procedure. For a current listing of IMOs, refer to the EPA's IT/IM Governance Membership: CIO SAC, SIOs, IMOs & SITLs.

Chief Information Security Officer (CISO): The CISO is responsible for: a) carrying out the CIO responsibilities under this policy and relevant information security laws, Executive Branch policy, and other directives; and b) maintaining professional qualifications required to administer the functions of the EPA Information Security Program and carry out the CIO's security-related responsibilities under this policy and relevant information security laws, Executive Branch policy and other directives.

Information Security Officers (ISO): ISOs shall conduct detailed information security analyses, review CPIC business cases for security requirements within their respective offices, and support Senior Information Officials (SIOs), investment owners (P/PMs), Information Management Officers (IMOs), and system owners in developing and maintaining CPIC information security documentation.

Senior Budget Officers (SBO): SBOs shall support the IMO(s) and SIO(s) in the process of development of IT investment proposals within their respective offices and monitor the implementation of IT investments. The SBOs shall coordinate with all relevant parties (e.g., SIOs, IMOs, FCOs, program office management, and acquisition staff, etc.) to ensure alignment of resources between IT investment business cases and the budget process from formulation through execution. This role may also pertain to the Regional Comptroller based on ownership of CPIC/IT resources.

Program/Project Managers (P/PM):
- Work with IMO(s), SBO(s) and other support staff to support the SIO(s) with IT investment development and monitoring.
- P/PMs develop and maintain viable, appropriate and achievable CPIC business cases that support EPA's goals for information management, thereby supporting the Agency's senior management in the process of selecting, reviewing, and evaluating IT investments.
- P/PMs ensure that the investment's goals and objectives are aligned with those of the Agency through the CPIC process.
- P/PMs must be qualified in accordance with federal and Agency requirements for IT project management and must possess documented knowledge and skills as prescribed by the qualification's guidance.
  - PMs supporting Major investments must attain Federal Acquisition Certification for Program and Project Managers (FAC-P/PM) at the Senior level. It is strongly recommended a back-up PM or POC supporting the same

Major investment also attain this certification.

- P/PMs shall work with the ISO within their respective offices to ensure that products developed incorporate security and meet user requirements and provide performance measures to evaluate the security of the delivered IT initiative.

Portfolio Management Division (PMD) Director: The PMD Director shall oversee and manage the CPIC program on behalf of the CIO.

CPIC Team Lead: The CPIC Team Lead shall coordinate CPIC Team efforts to support the EPA IT investment community and ensure the EPA is compliant with all internal and external reporting requirements.

7. RELATED INFORMATION

REFERENCES

- 40 United States Code (U.S.C.) 11319: Resources, planning and portfolio management
- U.S. Chief Information Officer's Council, TechStat
- EOP OMB FY22 IT Budget Capital Planning Guidance
- EOP OMB Memorandum M-15-14, Management and Oversight of Federal Information Technology
- EPA Section 508 Policy
- EPA Section 508 Acquisition Procedure
- EPA Section 508 Testing Procedure
- EPA Section 508 Exceptions Procedure
- EPA Data Standards Policy
- EPA Enterprise Architecture IT Standards Procedure
- EPA Acquisition Regulation (EPAAR)
- EPA IT/IM Architecture Program
- EPA IT/IM Governance Membership: CIO SAC, SIOs, IMOs & SITLs
- EPA READ Data Call
- EPA Records Management Policy
- FIPS 199 – Standards for Security Categorization of Federal Information and Information Systems
- General Accountability Office (GAO) Cost Estimating and Assessment Guide
- GAO Information Technology Investment Management (ITIM) Framework Information Technology Investment Management (IT/IM) Framework
- Information Security Policy
- Privacy Policy

- [Systems of Records Notices (SORN) Privacy Act Procedure](#)
- [Security and Privacy Controls for Information Systems and Organizations - NIST SP-800- 53 Rev. 5](#)
- [Program and Project Managers (FAC-P/PM)](#)
- [EPA System Life Cycle Management Policy](#)
- [EPA System Life Cycle Management Procedure](#)
- [Information Security - Roles and Responsibilities Procedures](#)

8. DEFINITIONS

Adequate Incremental Development: For development of software or services, planned and actual delivery of new or modified technical functionality to users occurs at least every six (6) months.

Baseline Change Event (BCE): Required change process step when baselined project/activity fields are updated. This is an oversight mechanism for OMB to track significant changes to investments which submit data to the Federal ITDB.

Budget Year (BY): In the context of the CPIC process, "BY" refers to the "Agency Request" for the Initial Submission and "President's Budget Request" for the President's Budget Submission. These amounts should only reflect budgetary resources (unless specifically indicating "Budget Authority") by year and include appropriations, borrowing authority, contract authority, spending authority from offsetting collections, transfers from other accounts, and carryover of unobligated balances.

Capital Planning and Investment Control (CPIC) Process: A process to acquire, implement, maintain, and dispose of IT. The CPIC process is a dynamic process in which IT investments are selected and then continually monitored and evaluated to ensure each chosen Capital Investment is well managed, cost effective and supports the mission and strategic goals of the government organization. The process integrates strategic planning, budgeting, procurement, and the management of IT in support of Agency missions and business needs, as defined in the CCA of 1996.

Control Phase: A 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.

Current Year (CY): CY is defined as the prior year's President's Budget for the Initial Submission and "Likely/Enacted" for the President's Budget Submission. These amounts

should only reflect budgetary resources by year and include appropriations, borrowing authority, contract authority, spending authority from offsetting collections, transfers from other accounts, and carryover of unobligated balances.

Enterprise Architecture: A set of products and integrations with platform services that support the enterprise mission, strategic goals, business practices, data assets and technologies. The EPA uses its IT/IM Architecture program site as its primary resource for disseminating information to Agency stakeholders about EPA's EA, including principles, guidelines, standards, and current and future visions to help EPA offices effectively implement and use IT.

Small and Other Investment: has development, operating, or maintenance annual expenditure costs equal to or less than 250K.

Lite IT Investment: Has development, operating, or maintenance annual expenditure costs equal to or greater than $250K, but less than $2M.

Medium IT Investment: Has development, operating, or maintenance annual expenditure costs equal to or greater than $2M, but less than $5M.

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. The qualities and operating characteristics of EVMS are described in American National Standards Institute (ANSI)/Electronic Industries Alliance (EIA) Standard –748–1998, Earned Value Management Systems, approved May 19, 1998. It was reaffirmed on August 28, 2002.

Evaluate Phase: Processes and guidance on comparing actual to expected results once an IT investment has been implemented; it provides an understanding of how to evaluate "mature" systems and their continued effectiveness in supporting mission requirements, and evaluates the cost of continued support or potential retirement and replacement.

Information and Communication Technology: IT and other equipment, systems, technologies, or processes, for which the principal function is the creation, manipulation, storage, display, receipt, or transmission of electronic data and information, as well as any associated content. Examples of ICT include, but are not limited to: computers and peripheral equipment; information kiosks and transaction machines; telecommunications equipment; customer premises equipment; multifunction office machines; software; applications; Web sites; videos; and, electronic documents.

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Pursuant to Delegation 1-19

Information Technology (IT):

Information technology (IT) is defined by the Clinger-Cohen Act of 1996 to be:
- Any equipment or interconnected system or subsystem of equipment, used in the automatic acquisition, storage, analysis, evaluation, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the executive agency, if the equipment is used by the executive agency directly or is used by a contractor under a contract with the executive agency that requires the use— (i) of that equipment; or (ii) of that equipment to a significant extent in the performance of a service or the furnishing of a product.
- Computers, ancillary equipment (including imaging peripherals, input, output, and storage devices necessary for security and surveillance), peripheral equipment designed to be controlled by the central processing unit of a computer, software, firmware and similar procedures, services (including support services), and related resources.

Within EPA, IT is defined to be any activity, procurement, service, or costs that align with the Technology Business Management (TBM) Taxonomy Towers, Subtowers, and Cost Pools (with the caveat that the IT Management Tower is exclusive to OMS). TBM reporting is required by the Office of Management and Budget (OMB) in the annual IT Budget – Capital Planning Guidance.

Any activity, procurement, service, or cost that is not aligned within the TBM taxonomy is not considered IT and should not be captured as such in Agency financial management systems or reported as part of the Agency's IT Portfolio Summary (AITPS) or IT Dashboard (ITDB) requirements.

IT Cost: Full time equivalent (FTE) and personnel compensation and benefits as well as services, equipment, and software/licenses (contracts, IAs, WCF, bank card purchases, etc.) that are primarily used in the management, operation, acquisition, disposition, transformation, or other activity related to the life cycle of IT.

Examples include:

- FTE directly spent developing requirements; system testing; developing and performing operations and maintenance (O&M) on a system.
- Contractor time spent configuring/developing and maintaining system/applications/architecture.
- Acquisition of network connected equipment, including servers and networked printers.
- Acquisition of licenses, software, etc.

Note: IT/IM directives are reviewed annually for content, relevance, and clarity
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- IT training specific to a system.
- FTE/Contractor time to perform security related activities (e.g., ATO, POA&Ms, etc.)

IT Investment: The expenditure of resources on selected information technology or IT-related initiatives with the expectation that the benefits from the expenditure will exceed the value of the resources expended (GAO-04-394G, IT Investment Management, A Framework for Assessing and Improving Process Maturity, March 2004, v.1.1). The acquisition and management of an IT asset through its life cycle.

IT Portfolio: A collection of the Agency's IT investments.

IT Project: A temporary planned endeavor funded by an approved information technology investment; thus, achieving a specific goal and creating a unique product, service, or result. A Project has a defined start and end point with specific objectives that, when attained, signify completion.

Life Cycle: The duration of all activities associated with the investment from initiation through the disposal of assets.

Major IT Investment: An IT investment that meets at least one of the criteria listed below:
- Is designated by the CIO as critical to the EPA mission or to the administration of programs, finances, property, or other resources (e.g., CIO discretion)
- Is for financial management and obligates more than $500K annually;
- Requires special management attention because of its importance to the mission of EPA;
- Has a significant program or policy implication, or Congressional interest;
- Has high executive visibility; and
- Has high development, operating, or maintenance annual expenditure costs greater than $5M.

Mission Investment: Internal EPA category which aggregates small systems below the CPIC Small/Other annual expenditure threshold of $250K at the NPM level to provide increased clarity regarding small system resources and spend. Alignment to NPM is determined by the PRC in EPA financial systems (e.g., BFS and Compass). These aggregated investments are not considered Major IT investments based on annual expenditure dollar value alone.

Organizational Breakdown Structures (OBS): A functionally-oriented division of the organization established to perform the work.

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Performance Management Baseline (PMB): A primary tool to measure IT Investment, IT project, or IT contract performance and identifying risk. The baseline identifies the work that will be accomplished and defines the cost and schedule to accomplish that work. The Performance Measurement Baseline, which consists of the cost, schedule, and scope baseline, is derived from the scope of work described in a hierarchical Work Breakdown Structure (WBS) – which, in turn, decomposes the entire project into a logical structure of tasks and activities tied to deliverables and to assigned responsibilities – and the associated WBS dictionary. The Performance Measurement Baseline comprises:

- The cost baseline, which defines the approved, projected, time-phased, life-cycle costs for acquiring, operating, and disposing of the physical and/or logical system represented by the scope baseline.
- The schedule baseline, which is the approved timeline for acquiring, operating, and disposing of the physical and/or logical IT asset/system.
- The scope baseline, which represents the configuration of the product of the project as developed and described in the project's technical documentation.

The Performance Measurement Baseline is integrated where the time-phased cost baseline is consistent with the schedule baseline, and the costs are related to acquiring, operating, and disposing of the physical and/or logical IT asset represented by the scope baseline.

Prior Year (PY): PY is defined as "Likely/Enacted" for the Initial Submission and "Actual" for the President's Budget Submission. These amounts should only reflect budgetary resources by year and include appropriations, borrowing authority, contract authority, spending authority from offsetting collections, transfers from other accounts, and carryover of unobligated balances.

Responsibility Assignment Matrix (RAM): Correlates the work required by a WBS element to the functional organization responsible for accomplishing the assigned tasks.

Select Phase: Process to ensure that IT investments are chosen that best support the Agency's mission and align with EPA's approach to enterprise architecture.

Standard Investment: IT goods and services common to all agencies. Standard IT investments are aligned to specific categories (IT Security and Compliance, Network, Data Center and Cloud, End User, Application, Delivery). It is expected these investments will comprise spending across multiple categories (e.g., a Network Standard IT investment may include Network and Delivery spending). Existing Mission Delivery and Mission Support Services IT spending should not be included in Standard IT investments. Standard Investments are reported to OMB bi-annually.

System (Information System): NIST defines an information system as "A discrete set of

information resources organized for the collection, processing, maintenance, use, sharing, dissemination, or disposition of information" (NIST SP 800-18 Rev. 1). Federal guidance gives agencies flexibility in constituting an information system and system managers must establish system boundaries to define the information resources allocated to the system. A single system may consist of several subsystems (*a component of a system that performs specific functions*). These subsystems fall under the governance of the overall system and should be included in the system documentation, but they do not require separate documentation. A system or subsystem may include information resources e.g., applications, web pages, databases, or spreadsheets. On their own these resources are not considered an information system, but once combined with other resources to perform a specific function or process it becomes a system or subsystem.

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.

Technology Business Management (TBM): A value-management framework instituted by CIOs, CTOs, and other technology leaders, which is founded on transparency of costs, consumption, and performance to give technology leaders and their business partners the facts they need to collaborate on business aligned decisions. Those decisions span supply and demand to enable the financial and performance tradeoffs that are necessary to optimize run-the-business spending and accelerate business change. To gain alignment between IT, Finance, and Business unit leaders, TBM provides a standard taxonomy to describe cost sources, technologies, IT resources, and solutions.

TechStat: A face-to-face, evidence-based accountability review between OMB and a covered agency of an IT program with that agency's leadership. TechStat sessions are a tool for getting ahead of critical problems in an investment, turning around underperforming investments, or terminating investments if appropriate. Agencies report the outcomes of all TechStat sessions through the quarterly Integrated Data Collection (IDC) process.

The EPA may also implement internal TechStat (also referred to as "T-Stat") meetings as a measure to address risks/issues before rising to the level where an OMB TechStat would be required.

Work Breakdown Structures (WBS): A task-oriented detailed breakdown, which defines the work packages and tasks at a level above that defined in the schedules.

9. WAIVERS

Waivers to the requirements of these procedures must be submitted by the SIO to the CIO for final approval. All waivers to the CPIC Policy and Procedures must be approved by the CIO.

10. DIRECTIVE(S) SUPERSEDED

The procedure supersedes EPA Information Directive: CIO 2120-P-02.5, Capital Planning and Investment Control Procedures, approved on October 23, 2023.

11. CONTACTS

For further information about this policy, please contact OMS – Office of Digital Services and Technical Architecture (OMS-ODSTA), PMD.

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