



U.S. DEPARTMENT OF  
**ENERGY**

Office of the Chief  
Information Officer

## Guide to IT Capital Planning and Investment Control



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## 1.0 PREFACE

This document has been prepared by the U.S. Department of Energy (DOE) Office of the Chief Information Officer (OCIO) to document the Department's Capital Planning and Investment Control (CPIC) process for information technology (IT) and provide Department-wide guidance. Consistent with the Office of Management and Budget (OMB) [Circular A-130: Management of Federal Information Resources](#), herein referred to as OMB A-130, the Department's IT CPIC process is an iterative process with inputs coming from across the Department, and outputs feeding into the budget and investment control processes.

### **Purpose**

The purpose of the DOE IT CPIC Guide, herein referred to as the Guide, is to provide guidance for a disciplined capital planning process as part of a continuing effort to remain consistent with new OMB requirements and leading best practices. Specifically, the Guide will:

- Establish the policies and responsibilities for performing IT CPIC processes throughout the Department;
- Serve as the IT management guide for the execution of IT CPIC;
- Demonstrate how the integrated and iterative Departmental CPIC process aligns and operates with other Departmental processes;
- Clarify IT management nuances within the Department's other capital asset management processes; and
- Document the Department's IT CPIC process.

The Guide is updated annually to include any new internal and/or external process changes.

### **Scope**

The Guide's scope addresses all major and non-major IT investments.

## 2.0 INTRODUCTION

### 2.1 Capital Planning and Investment Control Overview

As defined in [OMB Circular A-11: Preparation and Submission of Budget Estimates](#), herein referred to as OMB A-11, capital investment means “the planning, development, and acquisition of a capital asset and the management and operation of that asset through its usable life after the initial acquisition”. CPIC refers to a decision-making process that ensures IT investments integrate strategic planning, budgeting, procurement, and management of IT in support of agency missions and business needs.

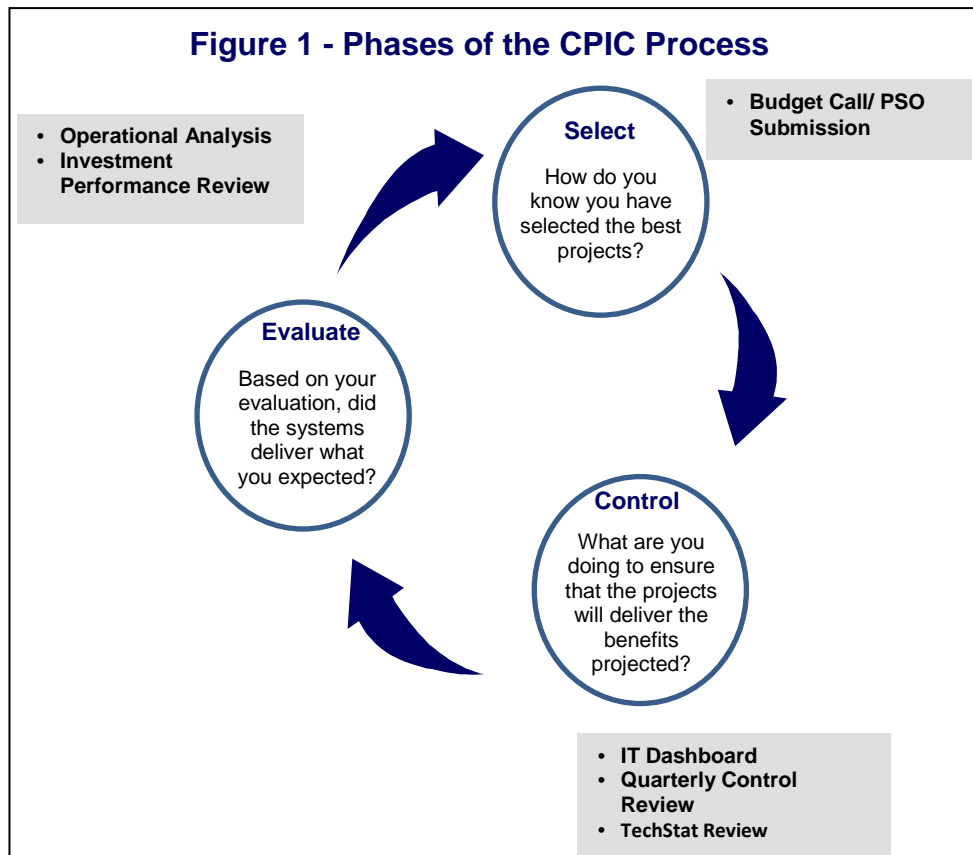
CPIC consists of the following three phases:

**Select** The process the Department uses to determine priorities and make decisions about which initiatives (new and ongoing) they will fund and include in the IT portfolio.

**Control** An ongoing management process designed to monitor the progress of initiatives against projected cost, schedule, performance, and expected mission benefits. The Control Phase helps to ensure each investment is properly managed.

**Evaluate** Once initiatives are fully implemented, actual versus expected results

are evaluated to: (1) assess the initiative's impact on strategic performance; (2) identify any changes or modifications to the initiative that may be needed; and (3) revise the investment management processes based on lessons learned, self-assessments and benchmarking.



A mature CPIC process yields numerous benefits to investment managers, key stakeholders and program and Departmental executives. Benefits include:

- Increased capability to achieve mission and business objectives
- Clear alignment of proposed initiatives with IT strategic goals and objectives, as specified in the DOE Strategic Plan and the DOE Information Resources Management (IRM) Strategic Plan
- Support and integration with Enterprise Architecture (EA) efforts

- Forum for measuring performance and net benefits for dollars invested
- Framework to balance potential benefits against costs and risk
- Protocol for setting IT priorities and making appropriate IT resource shifts based on priorities

There are various legislative and regulatory drivers for implementing CPIC. Many legislative reforms emphasize the need for Federal agencies to significantly improve how they plan, select, fund, control, and evaluate IT initiatives. The **Clinger-Cohen Act**, formerly the Information Technology Management Reform Act of 1996 (ITMRA), requires agencies to use a disciplined CPIC process to acquire, use, maintain and dispose of IT investments and encourages the use of performance and results-based management of these initiatives. The **Federal Acquisition Streamlining Act** requires that IT initiatives be tied to mission and strategic goals; have cost, schedule and performance goals; and achieve on average 90 percent of these goals. The Federal approach to IT CPIC has been the select-control-evaluate model that has been championed by the OMB, Government Accountability Office (GAO) and industry experts since the early 1990's.

To provide agencies with specific guidance on implementing the Clinger-Cohen Act, OMB regularly revises OMB A-130 specific to the sections concerning information systems and IT management. It requires agencies to follow the provisions of the Clinger-Cohen Act and OMB A-11, which involve the acquisition, use, and disposal of IT as a capital asset.

## 2.2 DOE CPIC Process Overview

The DOE CPIC process is a structured process, which encompasses the submission of all IT investment information to the OCIO for evaluation and resultant recommendation to the **Corporate Review Budget (CRB) Board** for inclusion, or continued inclusion, in the Department's IT investment portfolio and budget submissions. At DOE, **the CRB is composed of**

Also, the Department is required to submit Exhibit 300s for all major IT investments. OMB and the Department have defined major IT investments as those that meet any of the following criteria:<sup>1</sup>

- Any investment with cumulative steady state or mixed lifecycle funding of \$25 million or more across the Prior Year (PY), the Current Year (CY), and the Budget Year (BY);
- OMB directed portfolio IT investments;
- Requires special management attention because of its importance to the mission or function of the agency;
- Has significant program or policy implication;
- Has high executive visibility;
- Has high development, operating, or maintenance costs;
- Is funded through other than direct appropriations

Also, investments identified as "at-risk" during the CRB process are subject to budgetary action up to and including termination. The budget decisions resulting from the CRB process are documented in

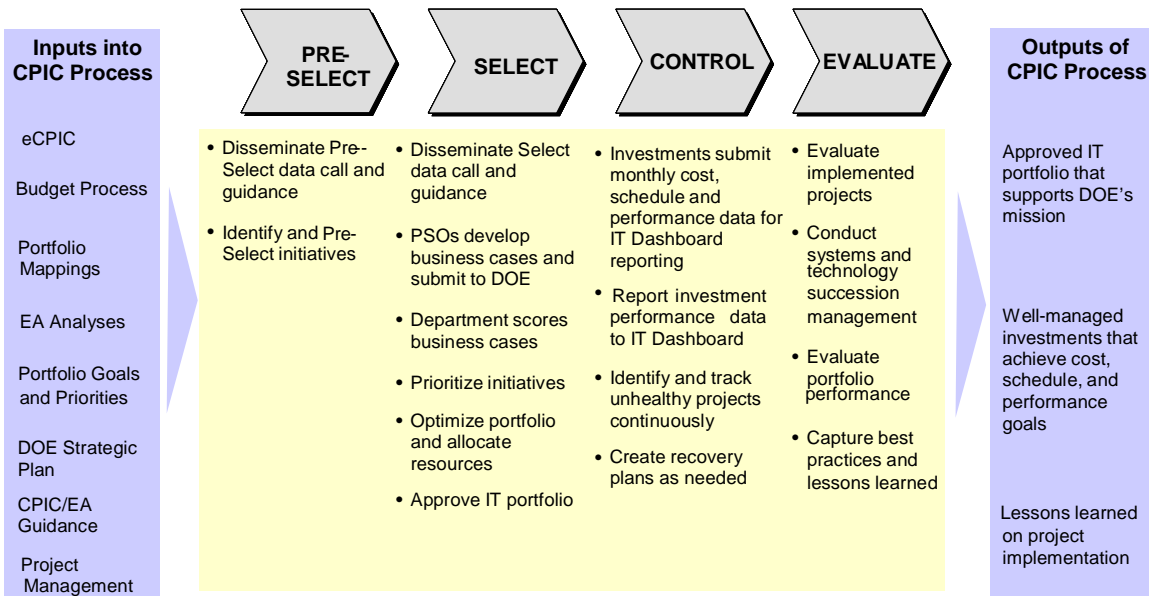
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<sup>1</sup>U.S. Department of Energy, *Information Technology (IT) Reporting Format and Requirements for BY 2013 Budget Submission, July 2011*, (Based on OMB Circular A-11, Sections 53 and 300, "Information Technology and E-Government")

Program Budget Decision (PBD) Memoranda which are provided to PSOs. PBD Memoranda provide specific direction to PSOs on revisions to proposed budgets including IT investments.

The evolving DOE CPIC process includes Pre-Select activities as well as the Select, Control and Evaluate phases, as shown in Figure 2, following:

**Figure 2– DOE CPIC Process**



**Pre-Select Activities**

The Pre-Select Activities provide a process to assess proposed IT solutions for unmet business requirements. They ensure that proposed IT investments support the agency strategic plan and mission needs as well as provide initial information to further support investments. It is during these activities that the business/mission need is identified and relationships to the Department and/or agency strategic planning efforts are established.

The Pre-Select Activities provide an opportunity to focus efforts and further the development of the initiative's concept. They allow project teams to begin the process of defining business requirements and associated system performance metrics, benefits, and costs, as well as subsequent completion of a business case and initial project planning efforts in preparation for inclusion in the Department's investment portfolio. Currently, Pre-Select activities occur at the Program and Staff Office (PSO) level where the PSOs determine which initiatives should be considered for inclusion in the Department's portfolio before submission to the OCIO.

**Select Phase**

The purpose of the Select Phase is to assess the costs and benefits of all proposed investments and to select the optimal portfolio of IT investments. The Select Phase is focused on the development and selection of an IT portfolio that supports the DOE EA and meets the mission and strategic goals of the Department. Investments are reviewed to evaluate whether or not there is a potential duplication of an initiative or existing DOE system application. Individual investments are evaluated in terms of technical alignment with other IT systems and other cost, schedule, performance, benefit and risk

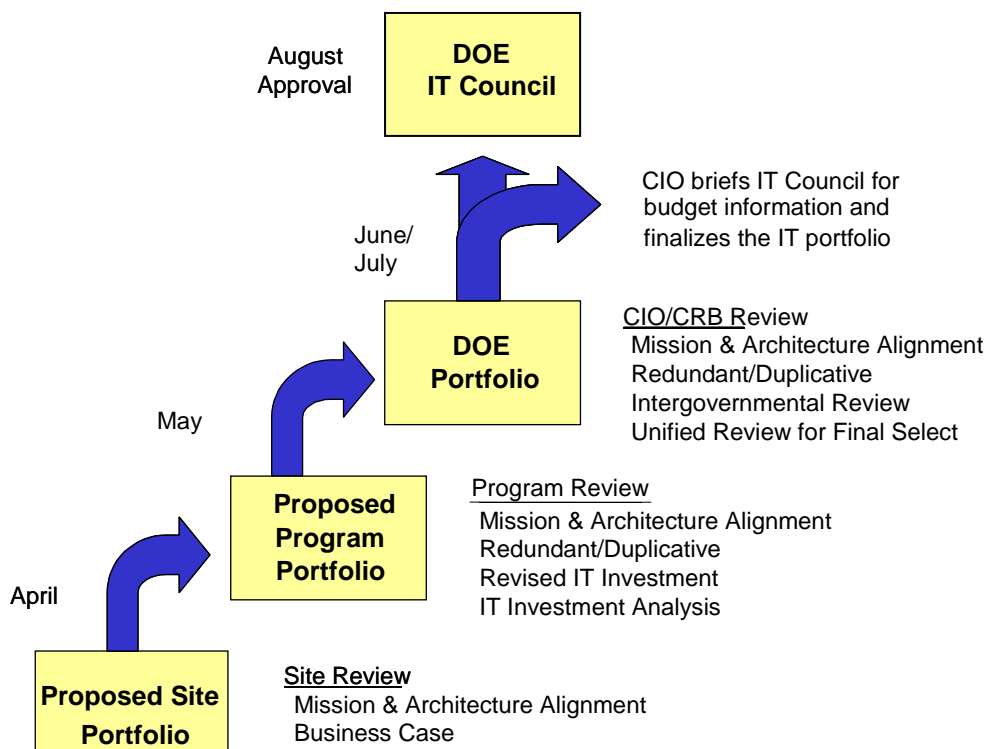
criteria. In this phase, the Department prioritizes the IT initiatives and makes decisions about which projects will be funded.

Key factors in selecting an IT initiative for inclusion in the IT portfolio include:

- Does the initiative and portfolio reflect the Department's strategic goals, objectives, and priorities?
- Have potential funding constraints been identified and considered?
- What is the expected return on investment (ROI) for the initiative?
- Have the ramifications of declining to fund certain initiatives been given careful consideration?
- Have all opportunities to invest in crosscutting initiatives been appropriately evaluated?
- Does the project conflict, overlap with, or is it redundant with other projects?
- Are the project owners capable of successfully executing the chosen IT portfolio (i.e., are the appropriate resources available to complete the included initiatives)?
- Have work processes been simplified or redesigned to reduce costs and improve effectiveness?
- Does the initiative make maximum use of commercial-off-the-shelf (COTS) software?
- Has the investment been decomposed into well-defined useful segments or modules?

The current process for the development and selection of the annual IT portfolio is illustrated in Figure 3. PSOs are responsible for evaluating target performance outcomes and reviewing all proposed investments to ensure that the IT portfolio is consistent with the program budget submission. IT investments are selected for the portfolio based on defined selection criteria consistent with the requirements of OMB A-11 and A-130, and **DOE Order 200.1A: Information Technology Management**. A sample list of selection criteria used by PSOs in making funding decisions is provided in [Appendix A, Sample Investment Select Criteria](#). Proposed IT portfolios are then forwarded to Headquarters with budget request data and incorporated into the Department-wide IT portfolio. Pursuant to an internal review and scoring for each IT investment business case by the **CIO/CRB**, a portfolio analysis is performed as part of the **CRB** process. As a result of budget decisions from the CRB process, the Information Technology Council (IT Council) reviews the final IT portfolio for final approval.

**Figure 3 - Annual IT Portfolio Selection Process**





## **Control Phase**

The purpose of the Control Phase is to ensure, through timely oversight, quality control, and executive review that IT initiatives are conducted in a disciplined, well-managed, and consistent manner within DOE. This process enables the effective management of the Department's IT investments. The Control Review sets in place a structured process to provide senior management with accurate information that will allow them to make timely decisions.

All major IT investments are subject to monthly OMB IT Dashboard reporting and internal quarterly Control Reviews. Monthly IT Dashboard reporting includes a review of project cost and schedule variances, performance metrics, project and operational risks and CIO Evaluation. Quarterly Control Reviews include a review of earned value management system (EVMS) data where applicable, and performance management data for investments not subject to EVMS requirements. IT investments not performing according to expectations (i.e., investments with cost or schedule variances that exceed 10%, or performance shortfalls that do not meet 90% of goals) are subject to additional detailed reviews, managerial corrective actions, and/or termination. In addition, all investments must report on project management qualification requirements as required by the Federal **Acquisition Certification for Program and Project Managers (FAC-P/PM)** guidance. This review assesses the qualifications of project managers for capability of project management performance of major IT investments, ensuring compliance with both external and internal regulations and guidance.

Building on the foundation of the IT Dashboard, OMB launched the TechStat Review, which is an evidence-based, data-driven review of an IT investment via face-to-face accountability sessions with internal DOE only or OMB and agency leadership. The intent of the TechStat Review is to gain a shared understanding of the objectives of the investment and understand the risks associated with continued investment. Investments are selected based on cost, schedule and performance data, and CIO evaluations reported on the IT Dashboard. The investments are carefully analyzed with a focus on problem-solving that leads to concrete action to improve performance. TechStat Reviews enable the Department to turnaround, halt or terminate non-performing IT investments.

## **Evaluate Phase**

The purpose of the Evaluate Phase is to examine whether an IT investment has met its intended objectives and yielded expected benefits as projected in the business case. A **Post Implementation Review (PIR)** is performed on IT systems 6 to 18 months after they are fully deployed. This review is important not only to determine the future viability of the IT investment, but also to assist IT managers in improving IT proposal business case requirements to better inform future IT selection decision-making.

Another component of DOE's Evaluate Phase is an operational analysis. The operational analysis serves as the method for examining the current performance of an investment and measuring that performance against an established set of cost, schedule and performance parameters. Further information about the operational analysis process is provided in the **Operational Analysis Guide**. DOE policy requires PSOs to conduct an operational analysis of steady state investments and investments with operational components at least annually. The results of the operational analysis are reported via the Operational Analysis and Exhibit 300 submissions, and are validated by the OCIO and IT Council.

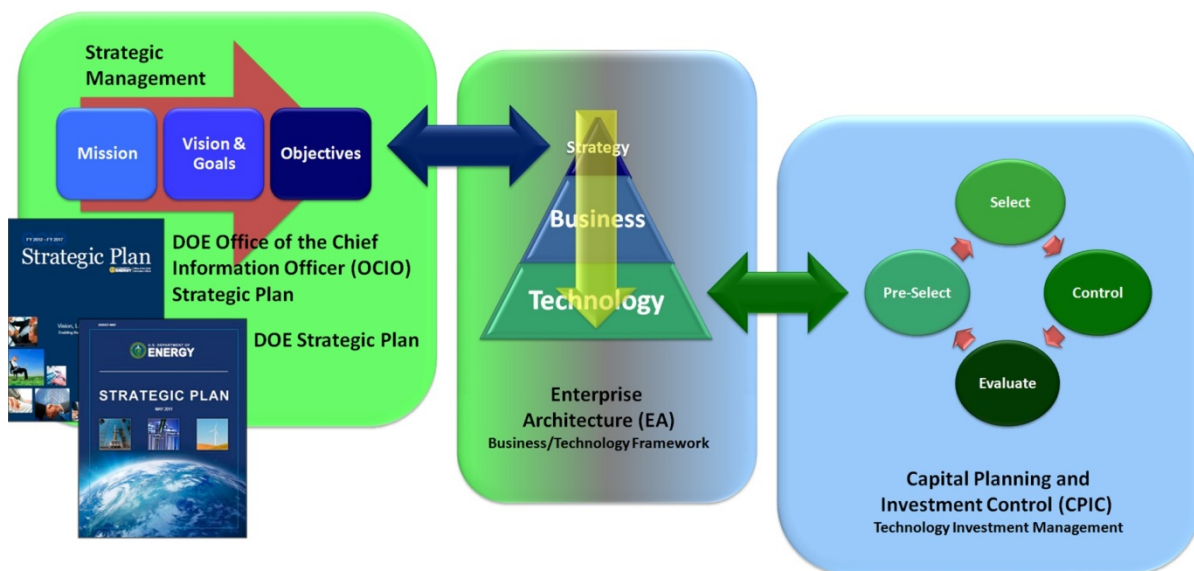
As noted in *GAO’s Assessing Risks and Returns: A Guide for Evaluating Federal Agencies’ IT Investment Decision-Making*, “the Evaluate Phase ‘closes the loop’ of the IT investment management process by comparing actual against estimates in order to assess the performance and identify areas where decision-making can be improved.”

The Evaluate Phase also assesses the Capital Planning process to ensure that the desired outcomes for IT investment management are achieved. This process includes a formal benchmarking mechanism whereby the DOE CPIC process is assessed against the GAO ITIM framework and improvement recommendations are developed. In addition, ad hoc benchmarking against governmental and private sector organizations are performed as necessary.

### 2.3 DOE CPIC Integration with Other IT Investment Management Processes

In addition to CPIC, OCIO strategic planning efforts and DOE’s Enterprise Architecture (EA) together constitute the DOE CPIC Integration, which is aimed at effectively managing the Department’s technology investment portfolio relative to the Department’s key strategies. Figure 4 below illustrates at a high level how these three components of the integration work together at the agency.

**Figure 4 - Strategic Business Management Framework**



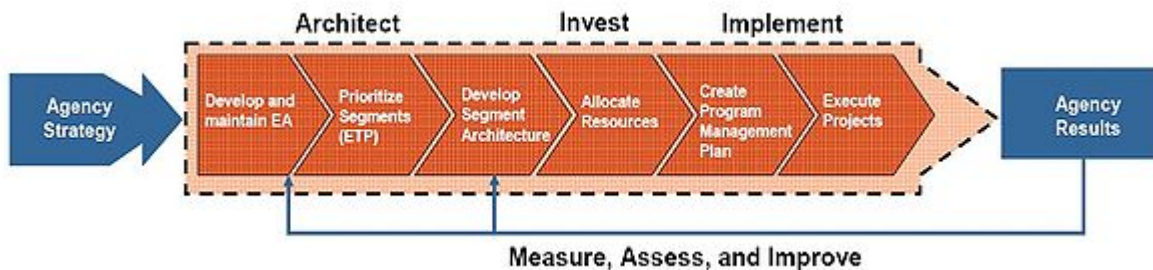
#### **DOE IRM Strategic Planning**

The DOE IRM Strategic Plan provides DOE a description of how Departmental activities help accomplish agency missions and program objectives. It also ensures that decisions are aligned with the Department’s organizational planning, budget, and program decisions. This allows the OCIO to articulate and champion distinctive shared visions with the Department’s programs combined with an over-arching corporate perspective for overall Departmental activities. As a result, the strategic goals and objectives drive the development of DOE’s architecture, which in turn determines resource allocation decisions under the CPIC process.

#### **EA Integration with CPIC Processes**

By integrating the disciplines of architecture, investment management, and project implementation, the DOE follows the Performance Improvement Lifecycle to provide a foundation for sound IT management practices, end-to-end governance of IT investments, and the alignment of IT investments with DOE’s strategic goals to achieve mission outcomes and results. The IT investments in the DOE CPIC portfolio together with DOE’s EA are managed to create a lifecycle that is divided into three-phases: Architect, Invest, and Implement. As architecture-driven IT investments are funded in the Invest phase, they move forward into the Implement phase where systems development lifecycle processes are followed, and actual versus planned outputs, schedule and expenditure are tracked utilizing performance-based management processes as shown in Figure 5.

**Figure 5 - DOE Integrated EA-CPIC Performance Improvement Lifecycle**



DOE has a mission to accomplish and, in doing so, has established priorities as stated in the DOE Strategic Plan and the DOE IRM Strategic Plan. These priorities and supporting functions and processes and related IT assets are captured in the DOE Enterprise Roadmap and documented as the baseline and target EA. In particular, an Enterprise Transition Plan is also documented in the Enterprise Roadmap to ensure that the mission priorities are achieved.

Additionally, CPIC processes have been established to ensure that investments and projects are mapped to mission priorities, that funding is budgeted for these investments and projects, and that their progress is tracked. The DOE EA is integrated throughout the CPIC processes of Select, Control, and Evaluate. On an annual basis as part of the Select and budget formulation processes, the Department reviews its investment portfolio to ensure that the Department funds IT initiatives that best support mission needs and are in alignment with the DOE EA, minimize risk to the Department, are consistent with strategic and operational planning processes, and provide the greatest return on investment to the user community. During the Control Phase, quarterly reviews are conducted to monitor investments throughout their lifecycle, starting from inception to completion or retirement. Schedules, costs, and changes in requirements are monitored and managed to ensure the investment stays aligned with the DOE EA and capture changes that may impact the DOE EA. The final phase, Evaluate Phase, examines whether an IT investment is continuing to meet its intended objectives, yielding expected benefits, and aligned with the DOE EA as intended. It comes after the system is accepted by the customer and is placed into production for an initial period of time, generally as part of the DOE Operational Analysis process.

DOE is continually planning ways to more fully integrate EA with CPIC, such as refining and standardizing investment assessment techniques to better align investments with the DOE EA; defining and evolving segment architectures using CPIC investment data; and delivering ever-improving portfolio management analyses for DOE EA usage, especially in defining goals for a DOE EA Target Architecture and measuring the achievement toward those goals. To accomplish this integration, the

Department has put in place a governance structure and related processes to guide and direct IT investments and deployments throughout the performance improvement lifecycle. It is expected that fully integrating the DOE EA and CPIC processes will provide:

- Rapid identification of IT investment goals for integration in the DOE EA
- Improved business function to IT alignment and conformance to the Federal Enterprise Architecture reference models and DOE reference models (as they are developed)
- Integration of strategic, budget and segment architecture information that will provide a better “line of sight” and approach for decisions that affect the direction of the Department
- Development of a more standardized system of investment and segment architecture prioritization to support the decision-making process
- Appropriate allocation of resources to the best portfolio of investments ensuring the achievement of DOE EA goals
- Capability for project initiators to search for duplicative solutions and reuse, which will eliminate unnecessary duplicative investments and provide cost avoidances in resources and funding

### **Program and Project Management for the Acquisition and Management of IT Investments**

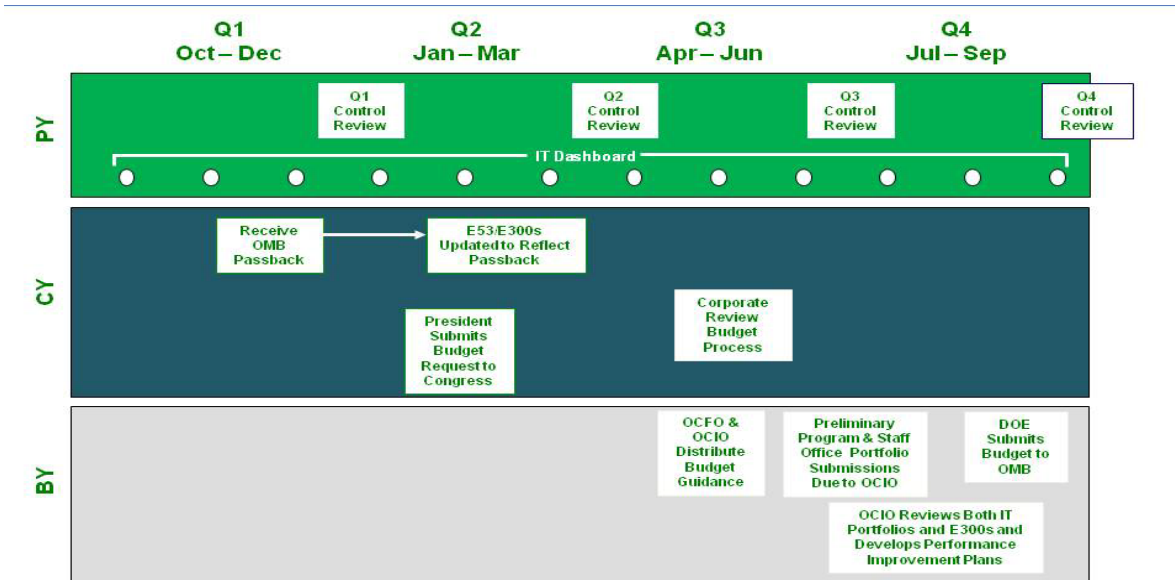
The Department aligns the IT CPIC process with DOE O 200.1A, *Information Technology Management*, to develop, implement, and maintain a Capital Planning and Investment Control process in compliance with OMBA-11 Section 55, OMB A-130, *Management of Federal Information Resources*, and the Clinger-Cohen Act. The Order requires the implementation of CPIC processes that effectively manage the selection, control, and evaluation of Departmental IT investments, ensuring prioritization and sound management.

In addition, DOE O 415.1, *Information Technology Project Management*, provides program and project management direction for the acquisition and management of IT projects, investments, and initiatives with the goal of delivering projects on the original performance baseline, including within budget, on schedule, and fully capable of meeting mission performance, safeguards and security standards.

#### **2.4 DOE CPIC Integration with DOE Budget Process**

CPIC’s iterative processes are integrated with the Department’s annual budget process. The two processes and how they operate together are illustrated in Figure 6.

Figure 6 - CPIC and Budget Process Integration



1

The process flow also demonstrates how the OCIO remains an active participant throughout the annual budget process in establishing investment priorities for agency information resources. Beginning in January, through the DOE Budget Call, the OCIO provides instructions for IT portfolio formulation to the PSOs. Based on this instruction, the PSOs submit their business cases to the OCIO for compliance analysis review and approval. The analysis and budget recommendations are then provided as input to the CRB process. The final budget requests are submitted to OMB for consideration. Towards the end of the calendar year, OMB reviews the budget requests and provides direction in the Passback. The OCIO participates in the Passback through helping PSOs revise their business cases based on OMB direction. Budgets and portfolios are then updated to reflect this direction.

## 2.5 DOE CPIC Roles and Responsibilities

Listed below are the IT investment roles and responsibilities of those currently involved in the Department’s CPIC process: IT Project/Program Managers; CRB/IT Capital Planning and Architecture Division/**Portfolio & Analysis Division** (IM-21); and the IT Council.

**IT Project/Program Managers:** IT Project/Program Managers are responsible for the oversight and execution of IT investments. They will be the initiators of the investments and responsible for overseeing the activities of the development and support staff (internal or external service providers).

**IT Project/Program Managers**

- Ensure that IT initiatives align with the Department's EA
- Initiate Pre-Select and Select documentation
- Manage the initiative throughout its lifecycle
- Participate in monthly IT Dashboard reporting and quarterly Control Reviews as required
- Oversee the initiative's progress, including cost, schedule, and performance
- Ensure the use of a System Development Lifecycle (SDLC) project management methodology
- Develop required SDLC documentation and submit accordingly
- Report on the initiative's progress at each lifecycle milestone
- Prepare progress and status reports as requested
- Document lessons learned once projects are implemented
- Participate in PIRs
- Perform ongoing operational analysis consistent with the lifecycle

**OCIO IT Capital Planning and Architecture Division (Portfolio & Analysis Division) (IM-21):** The IT Capital Planning and Architecture Division/Portfolio & Analysis Division of the Office of IT Planning, Architecture, and E-Government (IT Policy & Governance) consists of an interdisciplinary team (e.g., Financial Analysts, Technical Analysts, and Business Functional Analysts) formed to support day-to-day IT planning and management operations under the purview of the CIO. The IT Capital Planning and Architecture Division/Portfolio & Analysis Division provides CPIC-related guidance and support to PSOs.

**CRB/OCIO IT Capital Planning and Architecture Division/Portfolio & Analysis Division**

- Receive and review investment business cases against pre-determined criteria to determine whether they meet minimum viability and investment characteristic requirements. *(The Division reviews investment business case summaries and assesses architectural compliance, redundancies, and opportunities for collaboration. It works with project managers when additional information and clarification is needed).*
- Ensure that IT initiatives address accessibility requirements stipulated by Federal Acquisition Regulations and Section 508
- Analyze DOE's IT portfolio semi-annually and report results to CIO
- Meet with project managers to review status of investments and recommend corrective action as warranted
- Actively seek to identify "at risk" investments, act to mitigate risks or correct problem areas, and present significant issues to the IT Council for consideration
- Monitor major IT investments for progress against projected cost, schedule, and performance goals
- Prepare recommendations for the continuation, modification, or cancellation of funding for investments
- Report investments with cost and/or schedule overruns greater than ten percent and/or



**CRB/OCIO IT Capital Planning and Architecture Division/Portfolio & Analysis Division**

performance shortfalls exceeding ten percent of goals to the IT Council

- Create Control Review, IT Dashboard, Exhibit 53/300, and PIR user guides
- Review evaluations of implemented investments to identify lessons learned
- Vet lessons learned to the CPIC user community to ensure that all lessons learned have been captured and addressed
- Oversee the preparation of documents identified in the Department’s Guide to IT CPIC
- Perform annual CPIC review process and benchmark against IT information management
- Provide recommendations and support materials on IT investments
- Develop IT management policies and directives

**DOE IT Council** - The DOE IT Council, a board of senior DOE executives, reviews and approves the proposed Department IT portfolio presented by the CIO and is the principal advisory board for DOE on IT investment matters.

**IT Council**

- Reviews and approves Department’s IT portfolio
- Establish and maintain strategic planning processes in accordance with OMB guidance
- Facilitate the development, maintenance, and implementation of a sound and integrated Department-wide EA
- Facilitate the development, implementation, and maintenance of processes for maximizing the value and assessing and managing the risks of the Department's IT acquisitions
- Facilitate compliance with Department-wide IT management policies, plans and procedures
- Ensure full integration of IT strategic planning, IT capital planning and investment control, IT security management, and EA management in a manner that supports Departmental mission efficiency and effectiveness
- Identify opportunities for and facilitate collaborative approaches to IT initiatives across the Department to minimize redundancy and maximize the sharing and efficient use of data, information, knowledge and IT resources
- Provide a forum for the dissemination of lessons learned and best practices on IT issues, technologies, and other matters of interest to the Department.

## 3.0 SELECT PHASE

### 3.1 Overview of Select Phase

The Select Phase of the IT investment management process determines priorities and makes decisions about which projects will be funded during the year. The goal of the Select Phase is to ensure that the Department's IT investment portfolio is comprised of the appropriate range of investments that will best support its mission and strategic goals.

The Department has an IT portfolio whose composition changes as investments are modified, added to, or deleted from the portfolio. An analysis of the existing portfolio of IT investments helps to ensure that senior managers are informed of current costs, benefits, and risks associated with the existing portfolio.

In the information that PSOs submit to the OCIO, each IT initiative must document the business need for the investment. For each investment, the project manager must provide:

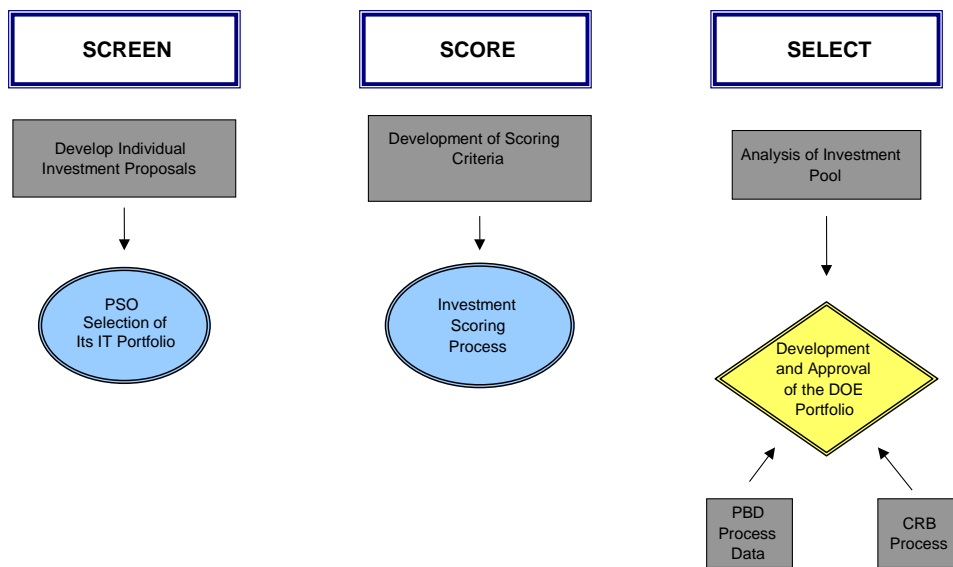
- How the initiative and portfolio reflect and support the Department's strategic goals, objectives, and priorities and Secretarial priorities and Congressional mandates, if applicable;
- A description of the initiative, the benefits to DOE if funding is provided, and the funding requested for development, equipment and maintenance for the entire lifecycle of the investment;
- How the investment resolves GAO and Inspector General (IG) findings and material weaknesses, if applicable;
- Initial project plan with estimated costs listed for each work package within the work breakdown structure (WBS);
- Performance measures that are tied to OMB's FEA Performance Reference Model (PRM);
- How risks will be managed; and
- How the investment conforms to the EA and other related information.

The Select process is supported and implemented through the Department's IT governance program and requires the participation and collaboration of all IT project/program managers with the PSOs, the OCIO, the OCFO, and executive-level decision-making bodies. Within the DOE, the Select Process is closely tied to the budget process, and therefore, the OCIO and OCFO are an integral part of the Select Phase.

There are three parts to the Select Phase: screen, score, and select as shown in Figure 7.



Figure 7 - DOE Select Process



### 3.2 IT Investment Screening

A starting point for the Select Phase is the screening process, in which projects being submitted for funding are compared against a uniform set of screening criteria and thresholds in order to determine whether the projects meet minimal requirements and to identify at what organizational level the projects should be reviewed. The costs, benefits, and risks of all IT projects whether proposed, under development, or operational are then assessed and the projects are compared against each other and ranked or prioritized.

For program offices that have sites reporting to them, site IT program managers review individual IT investment business cases and select investments for a proposed site portfolio to ensure that missions and goals are effectively and efficiently supported by the proposed portfolio and that the proposal is consistent with the site IT architecture. Individual IT investment business cases are reviewed to ensure that they are compliant with the requirements of OMB A-11 and A-130, and adequately justify the investment. The proposed site portfolio is sent to the appropriate Headquarters’ program office for review and inclusion in a program-wide portfolio.

Program office, as well as staff office, IT project/program managers screen major IT initiatives before submitting business cases (or updated business cases for ongoing initiatives) to the OCIO for scoring and selection into the Department’s IT investment portfolio. The program office IT portfolios are merged with staff office IT portfolios to create the Department’s proposed IT portfolio. Major IT investments are required to submit completed Exhibit 300s. The documentation is reviewed and scored for all major IT investments as part of the Department’s Select process.

### **3.3 IT Investment Scoring**

Following proposed investment submission by PSOs, the OCIO reviews Exhibit 300 submissions consistent with criteria established and promulgated by OMB. It is reviewed for quality and content in accordance with OMB A-11.

The OCIO reviews and develops Performance Improvement Plans (PIPs) for each major IT investment business case. The PIPs contain detailed comments for improving each section of the Exhibit 300.

### **3.4 IT Investment Selection**

The final selection of major IT initiatives to be included in the Department's IT investment portfolio is based on information gathered and analyzed during the screening and scoring stages of the IT CPIC Select process. The OCIO analyzes and compares initiatives within and across the available IT investment opportunities. Business cases that receive an overall internal passing score based on the OMB A-11 criteria will be tentatively included in the DOE IT portfolio pending further analysis and approval. Business cases that fail the structured review are returned with specific, detailed comments to the PSO for correction. All business cases in the portfolio are then subject to further high-level analysis and review in several areas of special interest to the Department. This review and revision process is repeated until a final business case is accepted by the OCIO as a valid, viable business case.

The analyses take into account the relative operational, technical, financial, and institutional strengths and weaknesses of each initiative. The Department's goal is to maintain a balanced IT investment portfolio that ensures, for any given funding investment, the best return to the Department's mission and functions.

In addition to the investment review, a portfolio analysis is performed. PSOs are required to submit proposed budgets including a variety of documents (e.g. Exhibits 300 and 53, budget justification documents, strategic plan/program plan) to be reviewed in order to make budget decisions.

Any investment identified as "at-risk" is subject to budgetary action up to and including termination. The budget decisions resulting from the CRB process are documented in PBD Memoranda and provided to PSOs. Based on that direction, the PSOs revise their respective budgets, business cases, and IT portfolios. Once the PSOs have made all required revisions to the IT business cases and portfolios and the OCIO has reviewed the final submission, the draft consolidated DOE IT portfolio is presented by the CIO or his designate to the DOE IT Council for final approval. The final DOE IT portfolio is submitted to OMB for budget review in September of each fiscal year in accordance with OMB A-11 guidance.

### **3.5 Select and eCPIC**

All major Exhibit 300 investments and non-major Exhibit 53 investments are maintained, updated, and submitted using the eCPIC system. This allows the Department to maintain a repository of investment information.

## 4.0 CONTROL PHASE

### 4.1 Overview of Control Phase

The Control Phase begins once investments have been selected, budgeted, and received funding. The Control Phase of the Department's IT CPIC process requires monitoring of on-going IT initiatives during the planning, acquisition, deployment, maintenance and operational phases of the IT investment lifecycle. The primary objective of the Control Phase is to assess the performance of investments and enable the effective management of all major IT investments.

The ability to adequately monitor IT initiatives relies heavily on outputs from effective investment execution and management activities. The Department has made significant strides in controlling its IT investments by establishing three review processes under the auspices of the IT Capital Planning and Architecture Division/**Portfolio & Analysis Division**. These are the IT Dashboard, Control Review, and Operational Analysis, which contain scoring criteria and processes to assess the performance and health of major IT investments. All major IT investments are reviewed in the areas of project management qualification, cost and schedule variance, and performance goals. "Passing" scores have been defined for each performance area.

The eCPIC application is used to facilitate the monthly IT Dashboard reporting and quarterly Control Review processes between the OCIO and the PSOs, as well as the yearly Operational Analysis review.

#### 4.1.1 IT Dashboard

Per OMB guidance, the OCIO requires all major DOE IT investments to report cost, schedule and performance data to the OMB IT Dashboard (<http://www.itdashboard.gov>) on a monthly basis. The **Information Technology Dashboard Monthly Reporting User Guide** was developed to assist PSOs in the update of their major investment information.

Therefore, each month, PSOs with major investments are required to report monthly performance data in eCPIC for the OMB IT Dashboard. Sections that are updated include the Projects Table, Project Activities Table, Project Execution Risks Table, Operational Performance Table, Operational Risk table, and the Re-baseline Table. The guide provides reason codes for re-baseline as provided by OMB. The OCIO employs internal IT Dashboard templates to collect, monitor, and analyze the updated investment data. The monthly IT Dashboard data is then aggregated for the quarter and presented to the DOE IT Council for final evaluation and scoring before upload to the IT Dashboard.

#### 4.1.2 Control Review

Per OMB guidance in A-130, the OCIO requires all major DOE IT investments be reviewed by the IT Council on a quarterly basis, and that the necessary corrective actions are instituted when investments fail to meet their objectives. The Control Review sets in place a structured process to provide senior management with decision-making information and to meet the goals and objectives that were established in the business cases submitted to OMB as part of the budget submission process. The **Quarterly Control Review Guide FY XXXX QX** was developed to assist PSOs in the update of their major investment information.

Therefore, PSOs with major investments are required to report quarterly performance data in eCPIC for the Quarterly Control Review. Sections that are updated are basically the same as those for the IT Dashboard, but includes Earned Value Management and project manager qualifications data. Also, the guide provides a Get Well Plan template and Earned Value Management guidance. The OCIO employs internal Control Review templates to collect, monitor, and analyze the updated investment data. The quarterly Control Review data is then aggregated for the quarter for presentation at the IT Council meeting for scoring. After the meeting, the data and scores are sent to the DOE IT Council via email for final evaluation and scoring before voting by the IT Council.

### 4.1.3 Operational Analysis

OMB requires that all operations projects be reviewed at least annually to document the continued effectiveness in supporting mission requirements and minimize the cost of asset ownership. The cost of asset ownership is defined as the total of all costs incurred by the owners and users to obtain the benefits of a given project or investment. The intent, in part, is to reduce the number of stove-piped legacy systems that are expensive to maintain. Operational Analysis results are reported to OMB each year in the Exhibit 300.

The annual Operational Analysis is also a key practice within the GAO ITIM maturity model. Using verifiable data, the investment board must regularly review the performance of IT projects and systems against stated expectations. Investment boards use operational projects' Operational Analyses to support the CPIC processes.

Therefore, DOE requires investments with operational components perform annual Operational Analysis. A project manager may choose to perform an Operational Analysis more frequently. The *DOE OCIO Operational Analysis Guidance*, based on the *OMB Capital Programming Guide*, was developed to assist PSOs in the development of their operational analysis report.

An Operational Analysis is the comparison of the performance of an IT asset or system to an established baseline. It primarily consists of tracking and identifying the operational cost, schedule, and performance of assets in the steady state phase of their lifecycle. At a minimum, performance measures should include how well the asset supports its customers and stakeholders, and how well the asset is managed by the agency. Specifically,

- How close actual annual operating costs and schedule are to the original life-cycle estimates;
- Whether the level or quality of performance /capability meets performance goals; and
- Whether the system continues to meet mission and user needs.

The results of this analysis include recommendations to agency managers as to the asset's continued use, modification, or termination.

## 4.2 Project Management

A qualified project manager is responsible for each major IT investment project. The DOE OCIO has developed a set of minimum project management qualifications based on the dollar value of the investment. Project managers are provided a certificate once they demonstrate both training and experience that qualifies them to manage a particular investment. In addition, the Department is

working with the DOE Office of Management, who is responsible for implementing the **Federal Acquisition Certification Program and Project Manager** requirements.

The Project Manager is responsible for establishing realistic project management and execution plans, procedures, and practices to support initiative monitoring activities. The Project Manager is also required to report to the OCIO and the IT Council on the status of the initiative's cost, schedule, and technical baselines each quarter. The baselines provide the framework and sufficient detail to assess the status of the initiative's major milestones, decisions, activities, and work products and deliverables.

Project managers also develop risk strategies to address problems or issues related to their investments. The resolutions of all issues are documented and corrective actions tracked. A corrective action to resolve deficiencies depends on the extent of change that would be required to the initiative's overall project plan, considering the cost (in terms of dollars and/or time) to make the change, and the calculated severity of the deficiency. Typical corrective actions for major deficiencies are:

- **Eliminate or avoid** the specific deficiency, usually by selecting a corrective action that eliminates the cause. As a general rule, elimination is pursued when the deficiency cannot be managed or the deficiency is costly.
- **Reduce** the expected cost associated with the deficiency. The option is employed when the elimination or avoidance of the deficiency is not likely. Instead, attention is focused on minimizing the consequences of the problem.
- **Accept** that a deficiency will occur and develop contingency plans to be executed should the deficiency occur. Contingency plans are pre-defined action steps to be taken prior to and if an identified deficiency should occur.

### 4.3 Earned Value Management (EVM)

The OMB requirements for appropriate project control include the implementation of an EVM System that meets ANSI/EIA-748 Standard. EVM provides an indication of how well an investment is meeting the cost and schedule goals defined prior to the outset of the investment. The determination of earned value begins with an estimate of the costs and schedule dates associated with completing investment work packages. Earned value is an assessment of the dollar value of the work actually accomplished based on the original cost estimates to complete the work. The earned value is compared to the planned value (which is comprised of the original cost and schedule estimates), and actual costs and completion dates to determine schedule and cost variances, respectively. The three major objectives of employing earned value are to provide:

- An effective internal cost and schedule management tool for use by project managers;
- Review bodies, with a mechanism for evaluating initiative progress; and
- A means to identify potential problems throughout the lifecycle in time to implement changes or corrective actions to ensure project objectives are met.

All IT initiatives must be planned, budgeted, and scheduled in measurable and phased "value-added" increments. Major IT investments with Total Project Costs over \$20 million and that have over \$5 million in D/M/E funding in CY or BY are required to use an ANSI/EIA-748 Standard compliant EVMS, as shown in Figure 8 and are to report EVMS data in **PARS** on a monthly basis.

Major IT investments with total investment costs between \$5 and \$25 million in the development phase have the option of using EVMS or another performance management system for management of the investment. Non-major IT investments with total investment costs below \$5 million are reviewed and managed within the PSOs, but are subject to Department-level review and reporting at the discretion of the OCIO.

**Figure 8 - DOE Exhibit 300 and EVM Reporting Requirements**

			<b>Major IT Investment</b>	
			<b>Development, Modernization or Enhancement (DME) Projects</b>	<b>Mixed (D/M/E + SS) or 100% SS</b>
<b>Total Estimated Costs</b> <i>(Life Cycle Costs)</i>	An investment with cumulative steady state or mixed life cycle funding of \$25 million or more across the PY, the CY, and the BY			
<b>Business Case (OMB Exhibit 300)</b>	✓		✓	
<b>ANSI-748 Certified Earned Value Management System</b>	Required for the D/M/E portion where the life cycle D/M/E is greater than \$20M and D/M/E funding is greater than \$5M in either the Current Year (CY), or Budget Year (BY through BY +n)		N/A	
<b>Performance Management System</b>	All major IT investments not covered by ANSI STD 748 EVM shall have a Performance Management System which assesses cost and schedule performance			

#### 4.4 Role of the DOE IT Council in the Control Phase

During the implementation/execution of the investment, the project managers conduct frequent reviews of their initiatives to assess progress against planned cost, schedule, and technical baselines. The primary purpose of these assessments is to ensure that the initiative is on track, and to identify issues or deficiencies that require corrective action. In addition, as part of the Control Phase, the project manager is responsible for reporting cost and schedule performance for the investment to the OCIO and the IT Council on a quarterly basis through the Control Review process (see 4.1.2, Control Review).

The OCIO receives the completed Control Review reports and conducts a preliminary analysis on the data. The reports and the analysis are then provided to the IT Council for their review. At the IT Council meeting, the IT Council the PSO representative has the opportunity to present a briefing on the current status of the investment(s).

The principal objectives of the IT Council’s review is to:

- Determine whether investments under review continue to support mission and business functions;
- Assess the extent to which investments continue to meet planned cost, schedule, and technical baselines;
- Identify deficiencies and track the completion of corrective actions;
- Make (and document) a decision for each investment to “continue-as-is” or be “modified” in order to improve its overall performance; and

- Score investments based on their status for the following six criteria: project management qualification, cost variance, schedule variance, performance goal variance, security, and earned value management.

As stated, the IT Council has the authority to recommend that investments either “continue-as-is” or the baseline milestones be “modified”. The recommendation to “continue-as-is” will be issued whenever an investment is within the 10% tolerance range for cost, schedule, and performance goal variance percentages and is satisfying existing guidance and policies (e.g., complying with project management and security guidance/policies). Greater scrutiny is given to initiatives that lag behind, exceed the budget, do not meet security and project management guidance/policies, or fail to achieve their performance goals. These investment managers are asked to submit their corrective actions via Get Well Plans. The recommendation to “modify” generally denotes two types of actions: (1) the re-scoping of cost and schedule; or (2) the implementation of corrective actions to address poor performing aspects of the investment.

In the event an investment continues to perform poorly over multiple review cycles, the IT Council may recommend to the OCIO that the investment be referred to the **DOE IT Council** for further review. The **DOE IT Council** is then responsible for taking the necessary action on the investment. These actions may include:

- **Accelerate:** External factors require the initiative to be completed sooner than expected or initiative resources are available that can enable an acceleration of initiative schedule.
- **Decelerate:** The initiative timetable or funding needs to be reduced in order to allow the initiative an opportunity to regain acceptable cost, schedule, and/or performance levels. Or, external factors, such as dependence on another initiative, require extending the investment lifecycle.
- **Suspend:** It is not cost-effective to proceed with further development or ongoing activity until problems stemming from resource shortfalls, initiative performance, system dependencies, or other external issues are resolved. In addition, a realignment of Department priorities among existing IT initiatives may result in the suspension of an initiative.
- **Cancel:** The initiative is no longer required or there is a low probability that it will ever meet acceptable cost, schedule or performance levels.

## **5.0 EVALUATE PHASE**

### **5.1 Overview of Evaluate Phase**

The Evaluate Phase includes two components: a Post Implementation Review (PIR) on implemented or cancelled investments, and an annual assessment of the performance of the Department's CPIC process. These activities are essential to the contributions that IT investments make toward the accomplishment of the Department's strategic goals and objectives, as well as the ongoing improvement and increased maturity of the CPIC process.

### **5.2 Post-Implementation Review on Investments**

The PIR, in essence, closes the loop with regard to the CPIC process by facilitating feedback on an investment's overall processes and its refinement. The need to evaluate an investment's ability to effectively meet the organization's mission needs, both functionally and economically, does not end at investment deployment. Rather, it is a continuous process to ensure that the investment still supports both the users' and mission needs.

The purpose of an investment PIR is to track and measure the impact and outcomes of implemented or cancelled IT investments to ensure they meet the program mission and/or obtain lessons learned. Some typical questions that are answered include:

- Did the delivered product meet the specified requirements and goals of the project?
- Was the user/client satisfied with the end product?
- Were cost budgets met?
- Was the schedule met?
- Were risks identified and mitigated?
- What could be done to improve the processes?

A PIR is typically conducted on implemented investments to evaluate the actual results compared to estimates/expectations in terms of cost, schedule, performance, and mission outcomes/strategic performance; determine the causes of major differences between planned and end results; and to help improve project management practices.

As part of the PIR process, a template and scoring criteria are provided in the Post-Implementation Review Guide so that PSOs can implement a standard process when conducting their PIRs. By applying the same evaluation criteria, it ensures consistent scoring across the Department. The PSOs should complete the template along with their proposed assessment of their investment's performance. The template contains much of the same information as that for the IT Dashboard and Control Review. This also provides a continuity of evaluation from the Select to the Evaluate phase.

To complete a PIR, comprehensive investment information must be gathered, analyzed and documented in a PIR Summary and Recommendations Report. Although the same factors will be used to assess all investments, the specific information that the investment is required to report may vary. Detailed requirements and the criteria by which the investment will be assessed for each type of review will be determined by the PSOs. Completed PIR reports are maintained in eCPIC.



Lessons learned enable the knowledge gained from past experience to be applied to current and future investments to avoid the repetition of past failures and mishaps. Lessons learned documentation can represent both positive and negative experiences. The ability of the project manager to more effectively manage an investment is greatly increased through this resource. Further, a review of lessons learned from prior investments will help identify problems that may materialize during the investment. Analysis of these problems should lead to ways to avoid or mitigate them. Reviewing lessons learned helps in setting a realistic schedule, estimating accurate costs, identifying possible risks/mitigation strategies, and feeds the continuous improvement process.

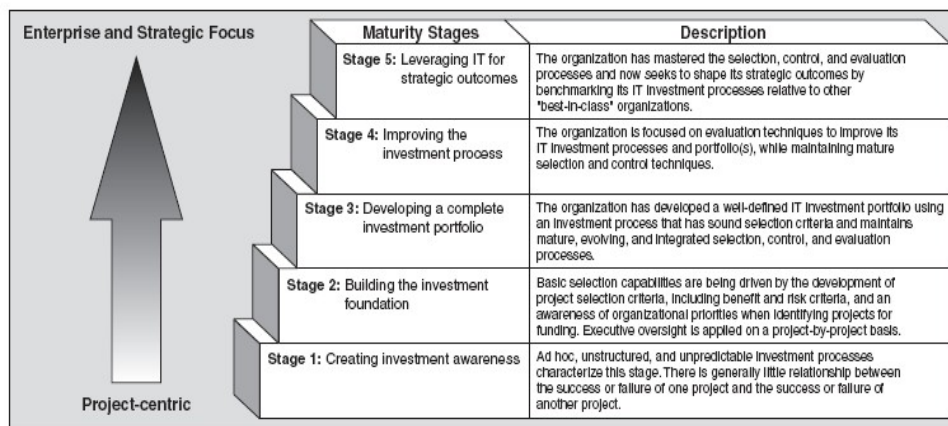
### 5.3 Annual Assessment of CPIC Processes

Using the collective results of annual CPIC evaluation assessments and PIRs, DOE is able to identify potential modifications to the CPIC selection, control, and evaluate processes based on lessons learned. Such an assessment provides insight into the strengths and weaknesses of the processes and procedures performed in the Select and Control phases of the CPIC process. As a result, the CPIC processes would be updated as needed.

One of the assessment tools used by the OCIO is the GAO process documented in *A Framework for Assessing and Improving Process Maturity*, March 2004. DOE conducts a self-assessment of its current CPIC processes against the framework to benchmark its ITIM maturity level and to identify opportunities for advancing current processes.

The purpose of the framework is to identify critical processes for successful IT investment and management and organize these processes into a framework of increasingly mature levels. GAO's framework provides a comprehensive model for evaluating and assessing an organization's CPIC process and helps identify specific areas for improvement. An overview of the framework is provided in Figure 9 below.

Figure 9 - GAO ITIM Stages of Maturity



Source: GAO.

**APPENDIX A: SAMPLE INVESTMENT SELECT CRITERIA**

The following table provides a list of sample value and risk selection criteria that can be used by PSOs to prioritize their IT investments as part of the IT portfolio development process.

<b>VALUE CRITERIA</b>	<b>0</b>	<b>1</b>	<b>2</b>
Mandatory Requirement	Initiative is not mandatory	Initiative strongly suggested in law, regulation	Initiative specifically required by law, regulation
Alignment to Mission, Goals, and Objectives	The initiative does not map to any mission, goal, or objective -OR- The initiative supports the Department’s (or sub-organization) mission, goals, and objectives but no documentation exists that clearly demonstrates the strategic alignment	Explicit documentation clearly maps the initiative to missions, goals, and objectives identified in the DOE Strategic Plan, the DOE IRM Strategic Plan, and sub-organization documents (if applicable)	Explicit documentation clearly maps the initiative to missions, goals, and objectives identified in the DOE Strategic Plan, the DOE IRM Strategic Plan, and sub-organization documents (if applicable) -AND- Accomplishment of Departmental (or sub-organization) mission, goals, and objectives is highly dependent on the initiative
Process Improvement	The initiative does/will <u>not</u> assist or generate process improvements	The initiative does/will assist or generate a process improvement within a Program or Field Office only	The initiative does/will assist or generate a process improvement within the entire Department
Consequences of Not Doing the Initiative	Business can continue and goals met without doing anything -OR- For on-going initiatives: If the initiative were discontinued, no adverse impacts would occur	Business processes can continue but may not be able to meet performance goals -AND- No viable alternatives exist that can achieve the same results for less risk or cost	Current business operations cannot continue unless this initiative is undertaken -AND- No viable alternatives exist that can achieve the same results for less risk or cost -AND- Delaying the initiative will result in significantly higher costs in the future
Impact on Internal and/or External Customers	The initiative has/will not significantly improve services to internal and/or external customers	The initiative has/will significantly improve services to internal and/or external customers and is clearly documented	The initiative has/will significantly improve services to internal and/or external customers and is clearly documented -AND- Failure to fulfill the customer’s requirements will result in multiple adverse impacts for the customer
Scope of Beneficiaries	The initiative does/will support a single DOE function and/or organization	The initiative does/will support multiple DOE functions and/or organizations	The initiative does/will support multiple government agencies or Departments
Payback Period	Investment will not be recovered within the economic life span of the project	Investment will be recovered within the first half of the economic life span of the project	Investment will be recovered within the first quarter of the economic life span of the project

RISK CRITERIA		0	1	2
History of Success	Developer has failed to deliver a major initiative in past 3 years -OR- Development responsibilities are unclear	Developer has not failed to deliver a major initiative in the past 3 years -AND- Development responsibilities are clear	Developer has no history of failures, delays, or quality problems in past 3 years -AND- Development responsibilities are clear and documented	
Alignment with EA and Standards	The initiative is not compatible with architecture principles, practices, and procedures -OR- The initiative's compatibility has not been addressed	The initiative is consistent with EA principles, practices, and procedures -AND- The initiative is consistent with information, applications, data, and technology baselines -AND- The initiative uses standard software and hardware	The initiative is consistent with EA principles, practices, and procedures -AND- The initiative is consistent with information, applications, data, and technology baselines -AND- The initiative uses standard software and hardware -AND- Configuration management and change control procedures have been addressed and are documented -AND- The initiative incorporates the following attributes to the greatest degree possible: scalability, portability, adaptability, accessibility, and vertical utility	
Initiative Ownership and Endorsement	Roles and responsibilities for initiative design, development, and deployment have not been documented -OR- Initiative ownership is unclear -OR- User Community input has not been collected or documented	Roles and responsibilities for initiative design, development, and deployment have been documented -AND- The overall initiative "owner" is the Functional Lead -AND- User Community endorsement is expected but not yet documented	Roles and responsibilities for initiative design, development, and deployment have been documented -AND- The overall initiative "owner" is the Functional Lead -AND- The User Community has been surveyed and endorses the initiative	
Security	Access controls are not adequate or there are no redundant edits or audit trails to protect against corruption or transactions. If important decisions are being made from the data, procedures for validating the data may not be fully adequate. The initiative is sensitive and accessible	Adequate security measures have been/will be designed into the initiative to restrict access to sensitive data. Important decisions are made from this initiative but there are adequate procedures to validate results. The initiative is sensitive but is accessible only to internal DOE customers -OR-	Adequate security measures are in place or being developed to restrict access to sensitive information or functions; there are redundant edits and/or audit trail mechanisms to protect against corruption of transactions prior to receipt; results are validated before the decisions are made -OR- The initiative is not sensitive,	

RISK CRITERIA		0	1	2
	via the Internet and to vendors or customers outside DOE	The initiative is not sensitive, important decisions will not be made based on its information, it is not accessible via the Internet to customers outside DOE, and adequate security measures are in place	important decisions will not be made based on its information, it is not accessible via the Internet to customers outside DOE, and adequate security measures are in place	
Schedule Risk	Factors on the initiative's critical path may impact this year's schedule by 30% or more -OR- The initiative's impact depends significantly on another initiative still needing completion	Factors on the initiative's critical path may impact this year's schedule by no more than 10% -OR- The initiative's impact depends on another initiative still needing completion -AND- Risk mitigation actions have been identified	For the next year, there are no predicted or foreseen adverse impacts on the initiative's schedule -AND- There are no major interfaces with other initiatives or systems	
Cost Sensitivity	The cost estimate is highly dependent upon uncontrolled variables (e.g., availability of external funding sources, changes in component pricing or maintenance contracts) and is therefore subject to significant change (>10%)	Situations may arise that may cause this year's costs to vary by no more than 10% of estimates	Measures to identify in a timely manner and reduce variances between the actual cost of work performed and the budgeted cost of work performed are clearly documented -AND- Cost estimates are not significantly dependent upon identifiable uncontrolled variables	
Performance Measures	Specific performance measures for supported functions are unknown or not formally documented -OR- Performance targets for the initiative are not documented	Specific performance measures for <u>some</u> supported functions are formally documented -AND- Specific performance targets for the initiative are defined in terms of supported functions measures	Specific performance measures for <u>all</u> supported functions are formally documented -AND- Specific performance targets for the initiative are defined in terms of supported functions measures	

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**APPENDIX B: LIST OF ABBREVIATIONS**

BY	Budget Year
C&A	Certification and Accreditation
CPIC	Capital Planning Investment Control
COTS	Commercial Off The Shelf
CRB	Corporate Review Board
CY	Current Year
DOE	Department of Energy
EA	Enterprise Architecture
EIS	Electronic Information System
EVMS	Earned Value Management System
GAO	Government Accountability Office
IG	Inspector General
IM-21	IT Capital Planning and Architecture Division/ <b>Portfolio &amp; Analysis</b> <b>Division</b>
IT	Information Technology
ITIM	Information Technology Information Management
ITMRA	Information Technology Management Reform Act
OA	Operational Analysis
OCIO	Office of the Chief Information Officer
OMB	Office of Management and Budget
PBD	Program Budget Decision
PIP	Performance Improvement Plan
PIR	Post Implementation Review
PRM	Performance Reference Model
PSO	Program and Staff Office
PY	Prior Year
ROI	Return on Investment
RTM	Requirements Traceability Matrix
SDLC	System Development Life Cycle
WBS	Work Breakdown Structure

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## APPENDIX C: FEDERAL LEGISLATION, REQUIREMENTS, & GUIDANCE FOR IT INVESTMENT MANAGEMENT

Note: OMB Circulars can be found at: [http://www.whitehouse.gov/omb/circulars\\_default/](http://www.whitehouse.gov/omb/circulars_default/)

OMB Memorandum can be found at: [http://www.whitehouse.gov/omb/memoranda\\_default](http://www.whitehouse.gov/omb/memoranda_default)

Executive Orders can be found at <http://www.whitehouse.gov/briefing-room/presidential-actions/executive-orders>

**Clinger-Cohen Act (CCA) of 1996:** The CCA is also known as the Information Technology Management Reform Act or ITMRA. It requires agencies to undertake capital planning and investment control by establishing a process for maximizing the value and assessing and managing risks of IT acquisitions of the executive agency.

**E-Government Act of 2002:** The Act builds upon the E-Government initiative by ensuring strong leadership of the IT activities of Federal agencies, a comprehensive framework for information security standards and programs, and uniform safeguards to protect the confidentiality of information provided by the public for statistical purposes. The Act also assists in expanding the use of the Internet and computer resources in order to deliver Government services, consistent with the reform principles, outlined on July 10, 2002, for a citizen-centered, results-oriented, and market-based Government.

**Federal Acquisition Streamlining Act (FASA) of 1994:** FASA requires agencies to define the cost, schedule and performance goals for major acquisition programs and to monitor and report annually on the degree to which those goals are being met. Agencies must assess whether acquisition programs are achieving 90% of their cost, schedule and performance goals.

**Federal Acquisition Reform Act (FARA of 1996):** FARA requires the head of each executive agency, after consultation with the administrator for Federal Procurement Policy, to establish policies and procedures for the effective management (including accession, education, training, career development, and performance incentives) of the acquisition workforce of the agency.

**Government Performance and Results Act (GPRA) of 1993:** GPRA requires agencies to prepare updateable strategic plans and to prepare annual performance plans covering each program activity displayed in the budget. The performance plans are to establish performance goals in objective, quantifiable and measurable form and performance indicators to be used in measuring relevant outputs, service levels, and outcomes.

**Government Performance and Results Modernization Act of 2010:** GPRMA requires quarterly performance assessments of Government programs for assessing agency performance and improvement, and to establish agency performance improvement officers and the Performance Improvement Council.

**Paperwork Reduction Act (PRA) of 1995:** PRA intends to: minimize the paperwork burden resulting from collection of information by or for the Federal Government; coordinate, integrate and make uniform Federal information resources management policies and practices; improve the quality and use of Federal information to minimize the cost to the government of the creation, collection, maintenance,

use, dissemination, and disposition of information; and ensure that IT is acquired, used, and managed to improve efficiency and effectiveness of agency missions.

**Chief Financial Officers' Act (CFOA) of 1990:** CFOA establishes the foundation for effective financial management, including requiring agencies to develop and effectively operate and maintain financial management systems. The Act 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. Under the Act, CFOs are responsible for developing and maintaining integrated accounting and financial management systems that include systematic measurement information on agency performance.

**Section 508 of the Americans with Disability Act (Section 508):** In 1998, Congress amended the Rehabilitation Act to require Federal agencies to make their IT and electronic technology accessible to people with disabilities. Section 508 will eliminate barriers in IT, to make available new opportunities for people with disabilities, and to encourage development of technologies that will help achieve these goals. The law applies to all Federal agencies when they develop, procure, maintain, or use IT and electronic technology. Under Section 508 (29 U.S.C. ' 794d), agencies must give disabled employees and members of the public access to information that is comparable to the access available to others.

**Capital Programming Guide (updated annually, and is contained in OMB Circular A-11):** The purpose of the Guide is to provide guidance to professionals in the Federal Government for a disciplined capital programming process, as well as techniques for planning and budgeting, acquisition, and management and disposition of capital assets. At the same time, agencies are provided flexibility in how they implement the key principles and concepts discussed. The guidance integrates the various Administration and statutory asset management initiatives (including Government Performance and Results Act (Pub. L. No. 103–62), the Clinger-Cohen Act (Divisions D and E of Pub. L. No. 104–106, the Federal Acquisition Reform Act and the Information Technology Management Reform Act of 1996, as amended; popularly known as the Clinger-Cohen Act), Federal Acquisition Streamlining Act of 1994 (Pub. L. No. 103–355), and others) into a single, integrated capital programming process to ensure that capital assets successfully contribute to the achievement of agency strategic goals and objectives.

**OMB Circular A-11, Part 2: Preparation and Submission of Budget Estimates:** Part 2 covers development of the President's Budget and tells how to prepare and submit materials required for OMB and Presidential review of agency requests and for formulation of the fiscal year budgets, including development and submission of performance budgets for each fiscal year. A significant portion of this part focuses on the preparation of the budget Appendix and the related database. Detailed instructions for a number of requirements not directly related to the preparation and production of the budget are accessible through electronic links that are provided in section 25 of A-11.

**OMB Circular A-11, Part 3: Selected Actions Following Transmittal of the Budget:** Part 3 discusses supplementals and amendments, deferrals, and Presidential proposals to rescind or cancel funds, and investments.

**OMB Circular A-130: Management of Federal Information Resources:** OMB A-130 provides information resource management policies on Federal Information Management / Information Technology (IM/IT) resources required by the PRA of 1980 as amended.

**OMB Memorandum M-97-02: Funding Information System Investments:** M-97-02 contains eight decision criteria commonly referred to as Raines Rules, which OMB will use to evaluate major information system investments.

**Executive Order 13011, Federal Information Technology:** 13011 highlights the need for agencies to significantly improve the management of their information systems, including the acquisition of IT, by implementing the relevant provisions of PRA, the Clinger-Cohen Act, and GPRA. Agencies are to refocus their IT management to directly support their strategic missions, implement an investment review process that drives budget formulation and execution for information systems, and rethink and restructure the way they perform their functions before investing in IT to support that work. Agency heads are to strengthen the quality and decisions of employing information resources to meet mission needs through integrated analysis, planning, budgeting, and evaluation processes.