



CDC UNIFIED PROCESS PROCESS GUIDE



CAPITAL PLANNING & INVESTMENT CONTROL (CPIC)

Purpose of the Process Guide

CDC projects are required to comply with various CDC and Federal regulations, mandates, policies, processes, and standards. Information about these requirements are available from various websites and supporting documents. However, this information is often not presented from the perspective of the project team and their roles & responsibilities in complying with these requirements. CDC UP Process Guides provide that perspective.

CDC UP Process Guides help project teams comply with CDC and Federal requirements by:

1. Setting the requirements in the context of their purpose
2. Providing step-by-step instructions for completing the activities required for compliance
3. Illustrating potential integration points between processes
4. Presenting requirements in a concise, easy-to-understand, and consistent format
5. Making that presentation accessible to the CDC community via the CDC Unified Process website

The specific purpose of this Process Guide is to describe the **Capital Planning & Investment Control (CPIC)** process as it applies to project teams.

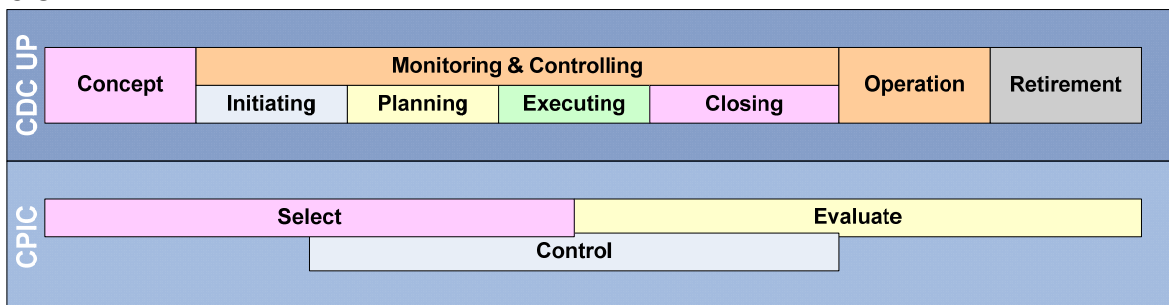
Process Overview

Capital Planning and Investment Control (CPIC) is a continuous and integrated process for managing the risks and returns of information technology (IT) investments. The CPIC process fully integrates with the CDC's overall budget, finance, acquisition, strategic planning, enterprise architecture, security, and other relevant processes. CPIC also aligns with HHS Enterprise Architecture and is used for all IT related decisions.

The CPIC process uses a systematic selection, control, and continual evaluation process. This process is made up of three phases:

- **Select** – During the Select Phase, all IT investments, new and existing, are reviewed and selected based on a distinct set of criteria, including alignment to mission and strategic business needs balanced against risk and benefit. A project approved in the Select phase becomes part of the HHS IT portfolio which is submitted to the Office of Management and Budget (OMB) for inclusion in the President's Budget.
- **Control** – During the Control Phase, projects are monitored and oversight is provided to ensure sound project management practices are being levied against the selected investments and the investments are on schedule, within budget, and meeting the scope of the work approved.
- **Evaluate** – The Evaluate Phase determines if the promised financial and non-financial benefits are being achieved. Post implementation reviews are conducted on implemented investments. In addition, investments that are in operations and maintenance are periodically revisited to determine if they should be retired or terminated.

The image below illustrates how the CPIC process aligns with the project management phases of the CDC UP.





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The **Select** phase of the CPIC process is made up of three sub-phases that include *pre-selection*, *screening*, and *portfolio prioritization*.

- The purpose of *pre-selection* is to justify the investment and to develop a business case and project management plan.
- The purpose of *screening* is to establish business need and mission alignment, to identify alternatives, calculate financial metrics, and develop performance goals.
- The purpose of *portfolio prioritization* is to select and fund the best investments, to compare investments across portfolios, and to create a portfolio of IT investments.

The **Control** phase of the CPIC process is made up of two sub-phases that include *periodic reviews* and *milestone reviews*.

- The purpose of *periodic reviews* is to monitor cost, schedule, and performance, to review earned value information, and develop corrective action plans, if necessary.
- The purpose of *milestone reviews* is to ensure alignment with mission and IT portfolio priorities, to perform strategic evaluation, and to re-baseline, if necessary.

The **Evaluate** phase of the CPIC process is made up of two sub-phases that include *post implementation review* and *annual evaluation*.

- The purpose of *post implementation reviews* is to identify lessons learned to improve development and the CPIC process and to perform independent audits.
- The purpose of *annual evaluations* is to identify emerging gaps in functionality, performance, and opportunities for collaboration, to perform operational analysis, perform e-gov strategy review, and to modify investments, if necessary.

The CDC CPIC process depends upon good project management practices throughout the life of the investment. The Project Manager (PM) is responsible for ensuring that the initiative achieves the approved cost, schedule, and performance baselines. For major IT investments, project managers must be assigned full time to the project and must have project management credentials that meet HHS requirements. PM responsibilities include:

- Develop project documentation in accordance with the CDC Unified Process as appropriate for the investment's category, size, and complexity
- Develop cost, schedule, and performance measures that will demonstrate progress using an Earned Value Management (EVM) system
- Ensure that select phase documentation is complete and accurately demonstrates the investment's value (i.e., how the investment supports the CDC mission and/or HHS's strategic and mission goals and the President's Management Agenda)
- Modify investment documentation based on the executive sponsor's review and recommendations.
- Acquire resources to develop the investment and/or assure resources are available to continue to operate and maintain the investment
- Update project management information in the IT portfolio management system
- Prepare documentation for control reviews
- Provide regular status reports to the executive sponsor and alert the executive sponsor when there are significant deviations from cost, schedule, or performance baselines
- Maintain project documentation, including earned value management data and the results of control reviews
- If needed, and with guidance from the executive sponsor, develop corrective action plans
- If needed, request adjustments to project baselines
- Manage the project resources to meet schedule, cost, and performance goals using an EVM system
- Prepare and submit any supporting documents required by the post-implementation review process (please refer to the CPIC website at: <http://intranet.cdc.gov/cpic/>)
- Evaluate the results of the post-implementation review to determine if any of the lessons learned can be applied to project management practices



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- Ensure that ESC updates are completed and budget information aligns with budget information in the HHS portfolio management tool

The CDC is required to submit annual reports to Office of Management and Budget (OMB) that provide details on IT funding expenditures and major investments. The Exhibit 53 (Agency Information Technology Investment Portfolio) classifies all IT investment information related to development, maintenance, IT security, and financial management expenditures. The Exhibit 300 (Capital Asset Plan and business case summary) provides critical data about a major investment; establishes cost, schedule, and performance measure baselines; and documents an investment's actual status and progress against the baselines.

The project managers (PM(s)) have primary responsibility for the individual 300s, and it should be the natural culmination of ongoing project efforts. The OCOO/CPIC office is responsible for working with the Budget Office's budget process to coordinate the preparation of IT Exhibit 300s and also prepares the Exhibit 53.

Criteria:

The beginning of the CPIC process involves entering IT investment information into the Enterprise System Catalog (ESC). CDC defines an IT system as a system that stores, analyzes, processes, manages, distributes, and/or provides access to electronic data and/or information.

To qualify for entry into ESC, the IT system must meet the following criteria:

- Have an expected life of one year or greater
- Use programming languages and/or database technology

This excludes systems developed for individuals or small work groups that are based solely on PC word processors, spreadsheets or similar tools (even if they use macros or scripts).

If you are not sure if your IT system meets the criteria defined above or you have questions regarding any part of the CPIC process, contact your CPIC NC liaison and the CPIC team.

Process Attributes

This section provides a list of process attributes to help project teams better understand the requirements necessary to comply with this process and to determine when and how they may impact their project.

PROCESS ATTRIBUTE	DESCRIPTION
Process Owner(s)	The CPIC team located in the Office of the Chief Operating Officer (OCOO).
Process Criteria	Required for all IT system/projects meeting the above criteria.
Timing of Process in Project Life Cycle	The beginning of the project's lifecycle, prior to project funding. Annually conduct cost benefit analysis. If determined to be a system requiring special management attention, a minimum of quarterly updates of Exhibit 300s are required. Additionally an Earned Value Management (EVM) is required for investments greater than \$500K in Development, Modernization, and Enhancement (DME).
Estimated Level of Effort	Entering investment information into ESC takes on average 20 minutes. For a new investment completing an Exhibit 300 can take a dedicated person 1-2 weeks if the project management plan is current.
Associated Costs	There is no additional cost except for the estimated level of effort listed above.



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PROCESS ATTRIBUTE	DESCRIPTION
Process Prerequisites	A project management plan business case that addresses schedule, cost/benefit analysis, and risk should be in place and should be maintained over the life of the project.
Process Dependencies	None
Related Systems/Tools	Enterprise System Catalog (ESC), ProSight, Earned Value Analysis (EVA) Tool (Dekker), Microsoft Project.
Available Training	IT project management and Exhibit 300 courses are offered by CDC Corporate University.
Additional Information	http://intranet.cdc.gov/cpic/

Contact List

This section provides a list of individuals and/or offices that are available to assist project teams in answering questions regarding the content of this Process Guide and related topics. The information is correct as of this publication. However, due to the ever-changing nature of our work environment it is possible some information may be out of date.

NATIONAL CENTER	ROLE	NAME
National Center for Birth Defects and Developmental Disabilities (NCBDDD)	Division Contact	Andy Autry/ Kenneth Demons
National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)	Division Contact	Mike Coss/ Cindy Allen
National Office of Health Genomics (NOPHG)	Division Contact	Scott Bowen/ Cindy Allen
National Center for Environmental Health (NCEH)	Division Contact	Monty HowieKen Long
National Center for Injury Prevention and Control (NCIPC)	Division Contact	Robin Forbes/ Mark A. Davis
Agency for Toxic Substances and Disease Registry (ATSDR)	Division Contact	Monty Howie/ Ken Long
National Center for Health Marketing (NCHM)	Division Contact	Carol Crawford/Scott Mullins
National Center for Health Statistics (NCHS)	Division Contact	Latria Dolberry/Linda Torian
National Center for Public Health Informatics (NCPHI)	Division Contact	Kimberly Hinton
National Institute for Occupational Safety and Health (NIOSH)	Division Contact	Kenneth McKneely
Coordinating Office for Terrorism Preparation and Emergency Response (COTPER)	Division Contact	Craig Thomas/Kevin Lyday
Coordinating Center for Infectious Diseases (CCID) Overall Portfolio	Division Contact	Khan, Agha (Nabeel)/Wanda Hall
National Center for HIV/AIDS, Viral Hepatitis, STD & TB Prevention (NCHHSTP)	Division Contact	Joe Nay
National Center for Immunization and Respiratory Diseases (NCIRD)	Division Contact	Karron Singleton
National Center for Zoonotic, Vector-Borne & Enteric Diseases (NCZVED)	Division Contact	Bob Fish



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NATIONAL CENTER	ROLE	NAME
National Center for Preparation, Detection & Control of Infectious Diseases (NCPDCID)	Division Contact	James Tolson
OD/ OCOO Financial Management Office (FMO)	Division Contact	Shelli Smalling/Daniel J. Hardee
OD/ OCOO Information Technology Services Office (ITSO)	Division Contact	Rodney Murray
OD/ OCOO Management Analysis Services Office (MASO)	Division Contact	John Goodson
OD/ OCOO Management Information Systems Office (MISO)	Division Contact	Sandra Chapman/ Allison Dural
OD/ OCOO Procurement and Grants Office (PGO)	Division Contact	Jamie Legier/ Terrence Perry
OD/ OCOO Office of Chief Information Security Officer (OCISO)	Division Contact	Kerey Carter
OD/OWCD Office of Workforce and Career Development (OWCD)	Division Contact	Gary Armstrong
OD/ OCOO Building and Facilities Office (BFO)	Division Contact	Stanley Davis
OD/ OCOO Capital Planning and Investment Control (CPIC)	Division Contact	Sandra McGill

Key Terms

The CDC Unified Process Team maintains a comprehensive list of key terms and acronyms relevant to all Unified Process artifacts maintained on the CDC UP website. Follow the link below for definitions and acronyms related to this, and other, document.

<http://www2.cdc.gov/cdcup/library/other/help.htm>

Activities Checklist

This section provides a list of steps outlining the activities associated with complying with this process, who usually performs those activities, and a list of any related documents or tools that may assist in completing the activities.

ACTIVITY	RELATED DOCUMENTS/TOOLS	PERFORMED BY
1. Once the project has been funded, the Project Manager or Investment Owner enters IT system information into the Enterprise System Catalog (ESC).	ESC (refer to the CPIC tools link on the CPIC website)	Project Manager or Investment Owner
2. Send email notification to your CC/ CO/ NC's CPIC contact that you have entered an IT system into ESC.	Email	Project Manager or Investment Owner
3. If the IT system requires special management attention because of its: <ul style="list-style-type: none"> • Importance to the agency's mission • High development, operating or maintenance costs • Significant role in the administration of agency programs, finances (especially if the system is financial management and outlays more than \$500,000 a year), property or other resources The CPIC team will request the project team to complete and maintain an OMB Exhibit 300 Form in the ProSight system.	Exhibit 300 Form Earned Value Analysis (EVA) ProSight (refer to the CPIC tools link on the CPIC website)	Project Manager (CDC FTE) or Investment Owner



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ACTIVITY	RELATED DOCUMENTS/TOOLS	PERFORMED BY
4. For supporting investments the CPIC team will advise investment owners and project managers about requirements for loading ProSight.	ProSight	Project Manager or Investment Owner
5. Send email notification to your NC's CPIC contact and the CPIC team, and the EA PMO. Informing them that your submission is completed in ProSight.	Email	Project Manager or Investment Owner
6. Exhibit 300's should be reviewed/updated quarterly through ProSight and as required as based on HHS data calls.	Exhibit 300 Form ProSight	Project Manager or Investment Owner
7. Annually perform a cost benefit analysis to determine if the IT system should continue.	ProSight	Project Manager or Investment Owner
8. Update ESC when the IT system changes or at a minimum annually.	ESC	Project Manager or Investment Owner
9. Review and validate the information in ESC to assure the information in the IT system is current.	ESC	Project Manager or Investment Owner
10. Monthly Earned Value Management updates	ProSight	Project Manager or Investment Owner



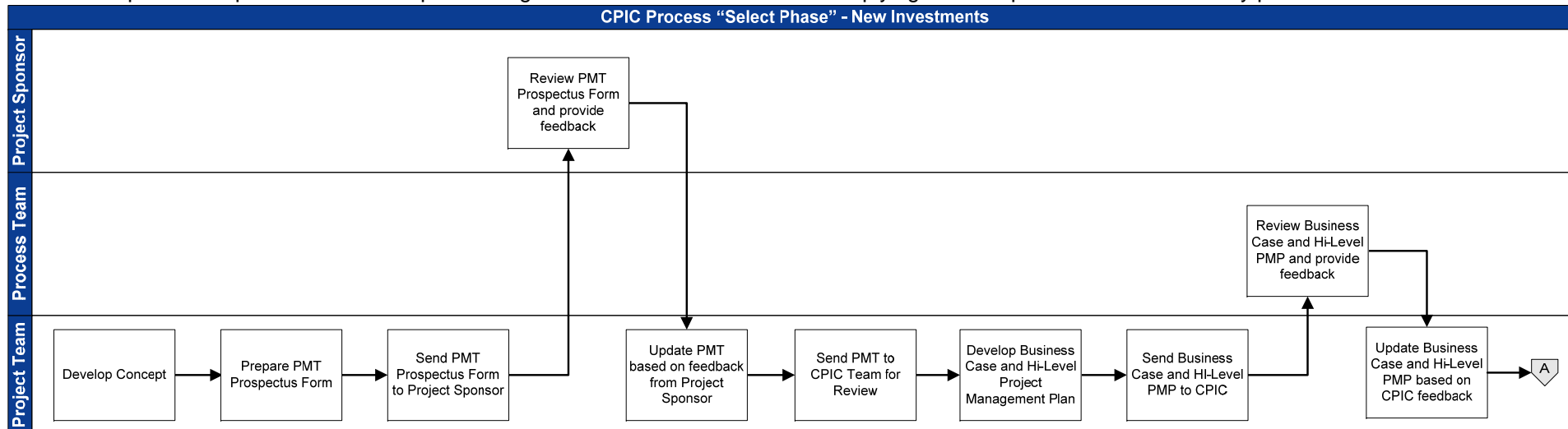
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Process Flowchart

This section provides a pictorial view of steps outlining the activities associated with complying with this process and who usually performs those activities.

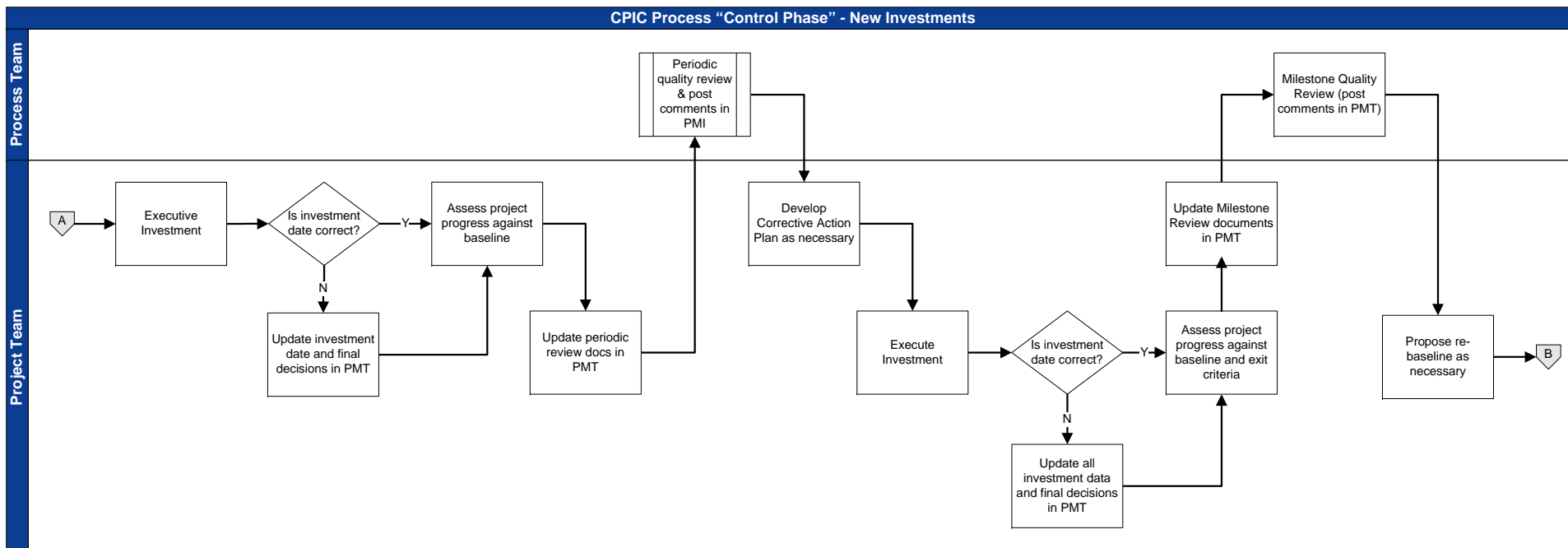




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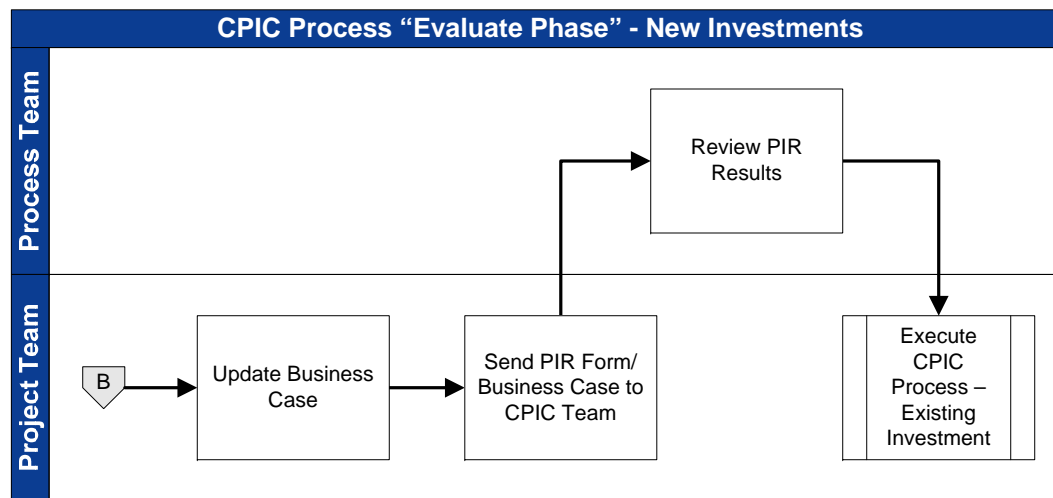




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CPIC Process - Existing Investment

