

DEPARTMENT OF VETERANS AFFAIRS
Office of Information and Technology



Project Management Guide

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Project Management Guide

Department of Veterans Affairs
Office of Information and Technology
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EXECUTIVE SUMMARY

The Department of Veteran Affairs (VA) considers effective project management a fundamental management responsibility and vital to achieving the Department's overall mission and objectives. Agency officials and organizational managers must understand the current status of and risks associated with their programs in order to make informed decisions. Risks must be appropriately mitigated with sufficient controls in place such as to insure that projects are completed on-time, within budget, and aligned with the business case in order to achieve the mission of the VA.

As distinguished from ongoing operations and maintenance, a project is defined as a related set of activities having a discreet beginning and end and resulting in the delivery of a specific product or service. Therefore this guide applies to projects defined, approved and funded by the VA in order to:

- ▲ Establish and communicate a consistent One VA project management framework for VA projects as developed by the Enterprise Project Management Council (EPMC) and the VA Office of Information and Technology (OI&T),
- ▲ Implement project management best practices incorporating common terminology and leverage the practices presented in the One VA Project Management Training and Certification Program, and
- ▲ Provide project management forms and reference information as a tool to aid Project Managers and the organization in the consistent management and delivery of VA projects.

The project management and system development processes, plans, and other outputs identified and described in this guide are based on the existing VA project management practices, incorporate other best practices from throughout the Federal IT sector as well as those of the Project Management Institute's Guide to the Project Management Body of Knowledge (*PMBOK © Guide 2000*).

The guide is divided into chapters which describe the project management activities and deliverables for each step of the VA IT Project Management Framework. Project management forms for outputs identified in each step are provided in the appendix.

The intended audience for this guide is primarily the project and program managers responsible for managing OMB Exhibit 300 level projects. However, the practices documented in the guide are scaleable and are thus applicable to projects which may not be identified as an OMB Exhibit 300-level investment project.

Specifically, the following individuals and groups will benefit from the utilization of this guide:

- ▲ Senior executives
- ▲ Program managers, managers of Project Managers, and supervisors
- ▲ Project managers and other project team members
- ▲ Members of Project Management Offices (PMOs)

- ▲ IT Customers and other project stakeholders
- ▲ Functional managers with employees assigned to project teams
- ▲ Consultants working with the VA organization to provide products and services

The VA IT Project Management Framework depicts the processes of the Milestone Reviews, the System Development Life Cycle steps, the VA Project Management Life Cycle, and the resulting VA IT outputs. This Framework, when incorporated with the PMI Project Management Life Cycle, covers the initiating, planning, executing, controlling, and closing phases.

The Framework addresses an effective, consistent management methodology that will provide the VA with useful, accurate and timely project information for achieving the successful delivery of project initiatives. The Framework represents the collection and recommended application of project management best practices throughout the VA organization. These project management processes will be transitioned to and aligned with the VA environment and current processes.

It is the vision of the Enterprise Project Management Council and the VA's Office of Information and Technology, that VA Project Managers incorporate this guide as a tool to aid in their responsibilities to deliver projects on time, on budget, and within the scope and alignment with the mission of the Department of Veterans Affairs.

CHAPTER 1 – VA IT PROJECT MANAGEMENT

1.1 Introduction

Prior to discussing the various phases, processes and standards involved in applying this guide to project management, the guide defines what project management is and the roles involved. Upon acceptance of the definition of project management internally, organizations can develop an infrastructure to provide the knowledge, skill, tools and techniques necessary to support projects, Project Managers and project teams.

The guide provides the foundation that enables the organization to conduct projects in a disciplined, well-managed, and consistent manner so that quality products are completed on time and within budget. Throughout the guide reference will be made to the Project Management Institute (PMI) and the Project Management Body of Knowledge Guide (PMBOK). PMI has established the industry standards for project management and the PMBOK embodies those standards.

Chapter 1 is an introduction to Project Management Best Practices as embodied in the PMBOK as well as other best practices used in both industry and government and describes how those are integrated into the framework to create a holistic approach to managing projects within VA. The guide does not simply restate the standards and processes defined by PMI's PMBOK but establishes an application of those standards to the Project Management Framework. The guide provides the methods addressing "what needs to be done" and "how it is to be done" in the execution and management of projects.

Large, complex projects require a more rigorous application of management processes than small, non-complex projects with readily achievable goals. The Project Manager assesses the project characteristics to determine how to tailor the information in the guide to that specific project and determine which project management processes will be required. This "tailoring" effort is reflected in the Project Management Plan and its associated documentation.

Additionally, the guide should be evaluated and refined over time (continuous improvement) in order to maintain the applicability, usability and acceptability of the processes and techniques defined. As the guide is implemented, lessons learned from its use will become invaluable to the continuous improvement effort.

1.2 Using this Guide

Chapter 1 provides background information and sets the context for understanding project management within VA. Chapter 1 defines project management, discusses the difference between project and program management, and describes VA's IT Project Management Framework. The remaining chapters lead the reader through the IT Project Management Framework by devoting a chapter to each major step in the VA project management process.

The guide appendices include project management forms a Project Manager would use to initiate, plan, execute, control, and close out their projects. A basis and collection of best

practices for project management as defined in the PMBOK is located in the appendix as a reference.

There is also VA-specific reference information, such as a glossary of project management terms within the context of the VA and the VA project management organizational governance structure, located in the appendix.

1.3 Project Versus Program

According to the PMBOK:

A project is a temporary endeavor undertaken to create a unique product or service.

A project exists only after a decision has been made to address a specific business need, either internal or external (customer need) to the organization, funding is available to support its execution, and measurable goals and objectives are well defined. Without knowing the expected results, quality level or capability of the end product, a project is difficult to plan, execute or conclude.

A project is temporary in that there is a defined start (the decision to proceed) and a defined end (the achievement of the goals and objectives). Ongoing business or maintenance operations are not projects. Process improvement efforts that result in better business processes or more efficient operations can be defined as projects.

Figure 1.1 depicts the process flow of a project.

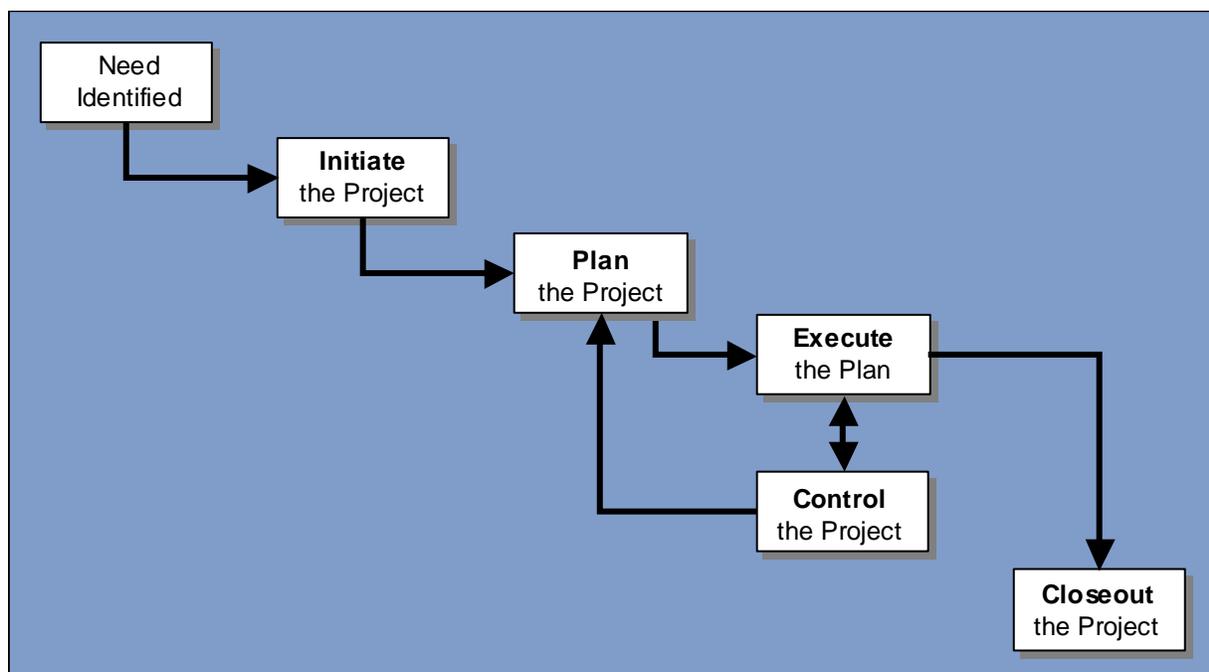


Figure 1.1: Project Process Flow

In most organizations, there is a descending hierarchy of endeavors ranging from the strategic plan to programs, projects, and subprojects. According to the PMBOK:

A program is a group of projects managed in a coordinated way to obtain benefits not available from managing them individually.

A program should consist of several associated projects contributing to the achievement of the strategic plan. Programs may also contain elements of ongoing operations.

Another means of grouping programs/projects for better management visibility and more effective decision-making is through Project Portfolio Management. This refers to the selection and support of projects from an enterprise perspective based on how they relate to the Strategic Plan. Programs/projects are ranked based on their return on investment (ROI) and their contribution to the achievement of the Strategic Plan.

1.4 Project Management Life Cycle

Project management processes are organized into five process groups. Each process group either interacts with the other process groups within a system development phase or across phases. These process groups are known as *initiating*, *planning*, *executing*, *controlling*, and *closing*. As depicted in Figure 1.9, VA IT Project Management Framework, these processes may be repeated during any of the steps of the life cycle. For example, repeating the planning process during each phase helps to keep the project focused on the business need and cost, schedule, and performance objectives. The project management processes are not discrete, one-time events; they are overlapping activities that occur at varying levels of intensity throughout each phase of the project.

These process groups and their relationship are depicted in Figure 1.2. Also identified are nine areas of knowledge that could be applied to a given project.

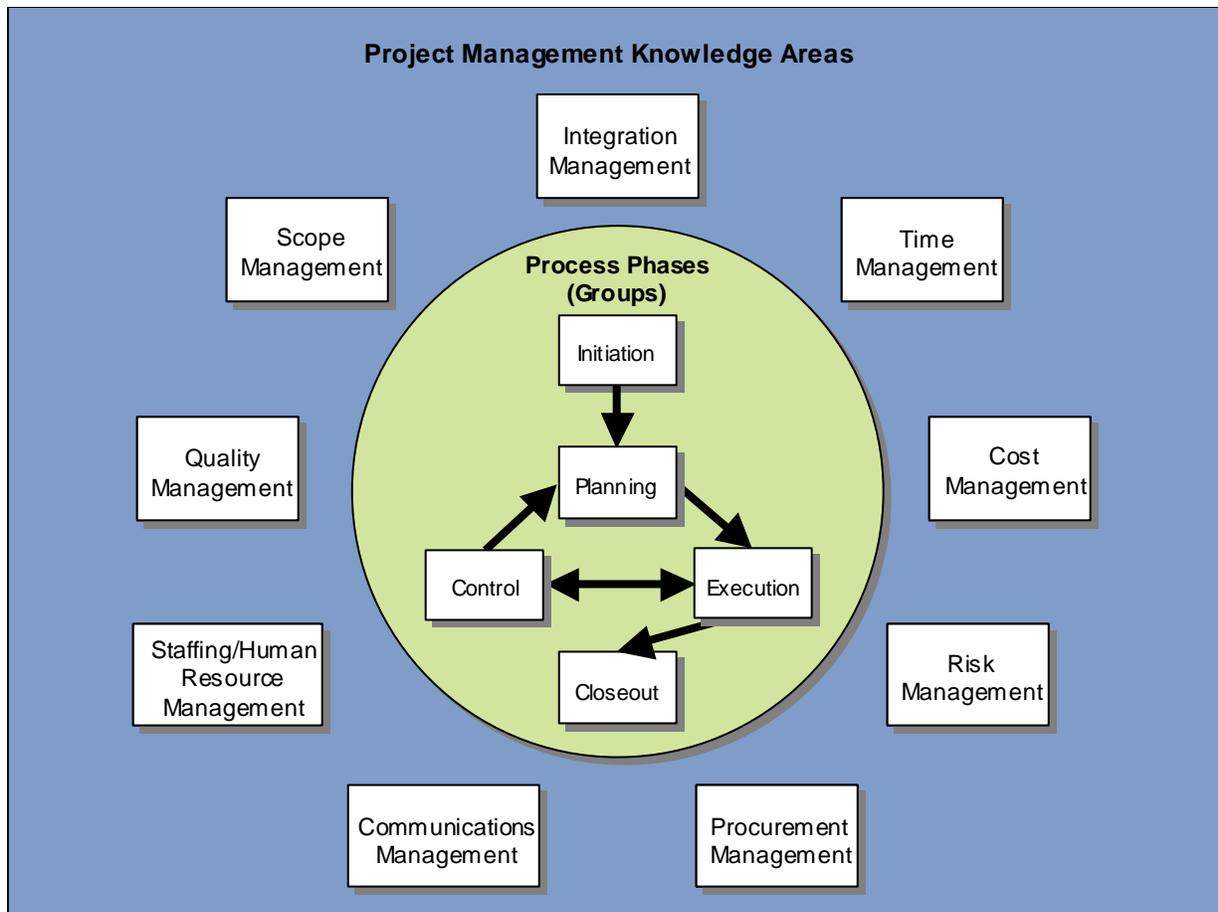


Figure 1.2: Project Management Knowledge Areas

1.5 Project Management is an Iterative Process

The application of project management is an iterative process. For example, within the Planning Phase, several iterations of planning may occur as the team develops the optimal product solution for a customer. Identified solutions may require refinements to the schedule, the cost estimates, the quality requirements and/or the risk planning. As changes occur, the impact to other areas must be determined. Over time, the iterations should become smaller in magnitude and more defined as more detailed information is developed.

After the initial Planning Phase has been completed, feedback from the Execution Phase (identified through the Controlling Phase) may result in adjustments to the project plan. Adjustments due to feedback typify the project management process. Project Management is a dynamic effort and requires a continual process of evaluation. Evaluation activities, such as oversight, quality control, and executive review are ongoing activities and affect every phase of the project.

1.5.1 Initiating

Initiating is the conceptual element of project management—the basic processes that should be performed to get the project started. This starting point is critical because those who will deliver

the project, those who will use the project, and those who have a stake in the project need to reach an agreement on its initiation. Involving all stakeholders in the project phases generally improves the probability of satisfying customer requirements by garnering the buy-in and shared ownership of the project by the stakeholders. The basic processes for the initiation phase are:

- ▲ Selecting the project
- ▲ Determining business needs
- ▲ Collecting historical data
- ▲ Determining objectives
- ▲ Determining high level deliverables and estimates
- ▲ Developing a product description
- ▲ Identifying the qualifications of the project manager that would be best suited for the particular project
- ▲ Determining high level resource requirements
- ▲ Obtaining project initiation approval.

Figure 1.3 depicts the initiation process flow.

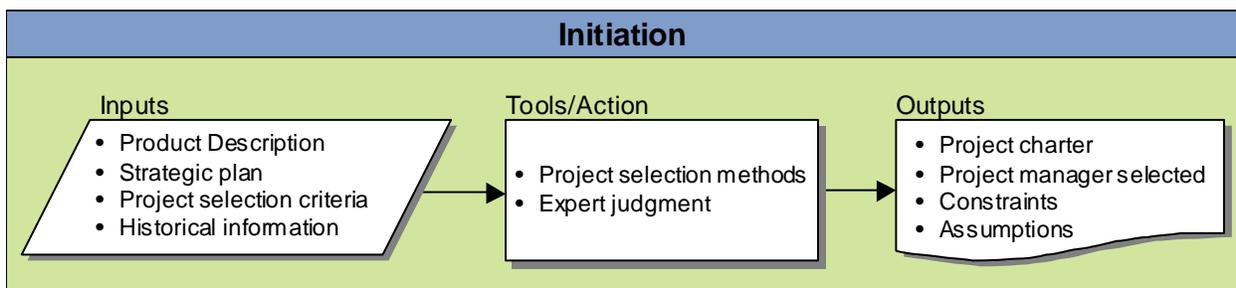


Figure 1.3: Initiation Process Flow

For the project to get started “right,” it is essential that all stakeholders participate in this critical initial phase of the project. The success of the organization and the project team depends upon starting with complete and accurate information, management support, and the authorization necessary to manage the project.

Figure 1.4 illustrates the project initiation phase stakeholder participation.

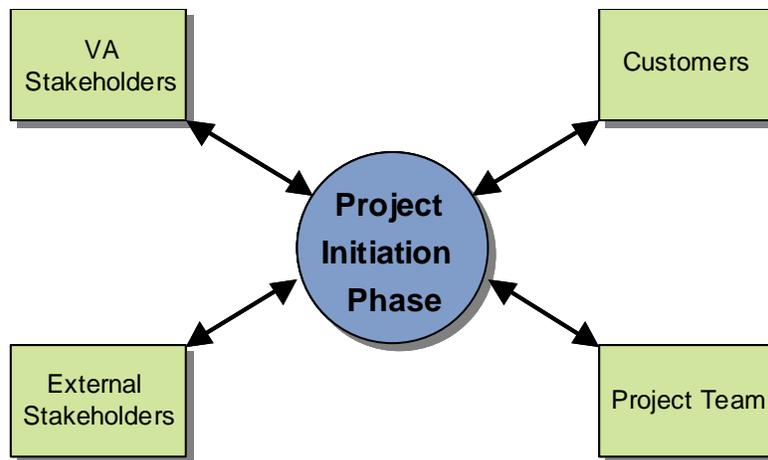


Figure 1.4: Project Initiation Phase

1.5.2 Planning

The planning phase is considered the most important phase in project management. Time spent up front identifying the proper needs and structure for organizing and managing a project saves countless hours of confusion and rework during the execution and control phases of the project.

Project planning defines project activities that will be performed, the products that will be produced, and describes how these activities will be accomplished and managed. Project planning defines each major task, estimates the time, resources and cost required, and provides a framework for management review and control.

Planning involves identifying and documenting scope, tasks, schedules, cost, risk, quality, and staffing needs. This planning process:

- ▲ Identifies specific work to be performed and the goals that define the project.
- ▲ Provides documented estimates regarding schedule, resources and cost for planning, tracking, and controlling the project.
- ▲ Obtains organizational commitments that are planned, documented, and agreed upon
- ▲ Continues the development and documentation of project alternatives, assumptions, and constraints
- ▲ Establishes a baseline of the plan from which the project will be managed.

The result of the project planning, the project plan, will be an approved, comprehensive document that allows a project team to begin and complete the work necessary to achieve the project goals and objectives (product/process). The project plan will address how the project team will manage the project elements. It will provide a high level of confidence in the organization's ability to meet the scope, timing, cost, and quality requirements by addressing all aspects of the project.

The planning phase is comprised of a number of processes that will estimate the project's size, technical scope, and the required resources. It will produce a schedule, identify and assess risks, and negotiate commitments. Completing these processes is necessary to establish the entire,

comprehensive project plan. Typically, several iterations of the planning processes are performed before the plan is completed and approved.

Figure 1.5 depicts the planning process as a series of activities and steps to be completed that result in a complete project plan. These process activities will:

1. Produce a plan that will define how the project objectives will be achieved – scope, schedule, resources and cost.
2. Establish subsidiary management plans that will define how specific aspects of the project will be managed to make certain the objectives are met.

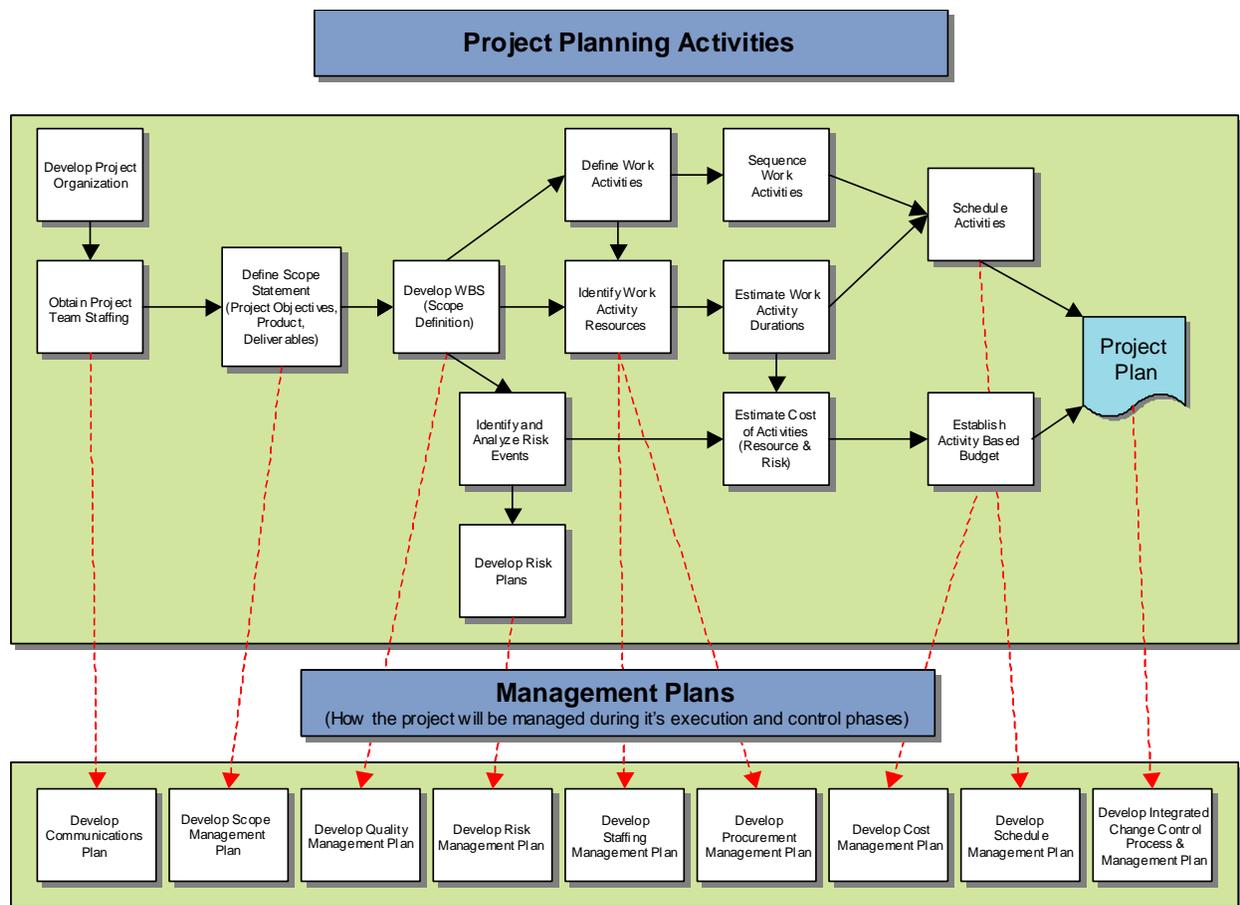


Figure 1.5: Project Planning Process Phase Activities

The planning process will result in the development of the subsidiary management plans which are:

- ▲ Cost management plan
- ▲ Staffing/Resource management plan
- ▲ Scope management plan
- ▲ Schedule management plan
- ▲ Quality management plan

- ▲ Procurement management plan
- ▲ Communications management plan
- ▲ Risk management plan
- ▲ Integrated change control management plan.

1.5.3 Executing

Once a project moves into the execution phase, the project team and all necessary resources to carry out the project should be in place and ready to perform project activities. The project plan is completed and baselined by this time as well. The project team's and specifically the Project Manager's focus now shifts from planning the project efforts to participating in, observing, and analyzing the work being done.

The execution phase is when the work activities of the project plan are executed, resulting in the completion of the project deliverables and achievement of the project objective(s). This phase brings together all of the project management disciplines, resulting in a product or service that will meet the project deliverable requirements and the customers need. During this phase, elements completed in the planning phase are implemented, time is expended, and money is spent.

This phase requires the Project Manager and project team to:

- ▲ Conduct, coordinate and manage the ongoing work activities
- ▲ Perform quality assurance activities continuously to ensure project objectives are being met or achieved
- ▲ Monitor identified risks for triggering events and implement containment or contingency strategies as necessary
- ▲ Manage change.

In short, it means coordinating and managing the project resources while executing the project plan, performing the planned project activities, and ensuring they are completed efficiently.

The execution phase is when the project's deliverables are produced and the objectives are met. This phase entails the completion of the work activities, the expenditure of resources, and the application of the quality assurance processes to ensure that the end product(s) is viable and meets customer requirements.

Several supporting processes are part of this phase. They may include:

- ▲ Team development
- ▲ Solicitation
- ▲ Source selection
- ▲ Contract administration
- ▲ Quality assurance

▲ Information collection and distribution.

Figure 1.6 shows how these processes fit into the execution phase.

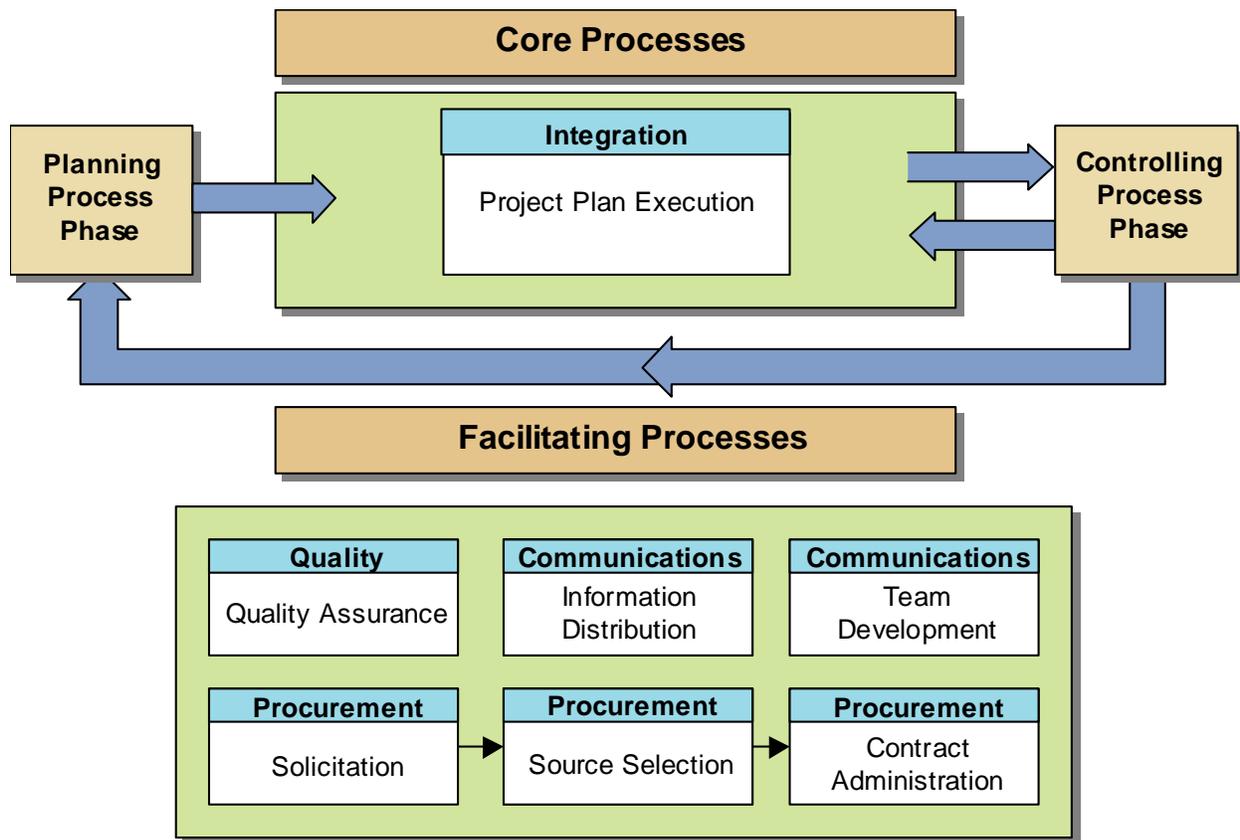


Figure 1.6: Project Execution Phase Processes

The execution phase involves coordinating and managing project activities and the subsequent output. The focus of the Project Manager and the project team is on the day-to-day management of the overall effort. In addition to the processes and activities defined above, the subsidiary management plans are implemented and project performance is monitored and managed accordingly. Several of these facilitating processes (quality, communication, human resource, change, and procurement) are an integral part of the project execution process, while others serve as support functions for managing the project.

1.5.4 Controlling

Control is a formal process in project management. The PMBOK defines Project Control as a project management function that involves comparing actual performance with planned performance and taking corrective action to yield the desired outcome when significant differences exist. By monitoring and measuring progress regularly, identifying variances from plan, and taking corrective action when necessary, project control ensures that project objectives are met.

Project control involves the regular review of metrics and report status to identify variances from the planned baseline. The variances are determined by comparing the actual performance metrics

from the execution phase against the baseline metrics assigned during the planning phase. If significant variances are observed, adjustments to the plan are made by repeating and adjusting the appropriate project planning processes.

A significant variance from the plan does not explicitly require a change, but should be reviewed to determine whether preventive action is warranted. For example, a missed activity finish date may require adjustments to the current staffing plan, reliance on overtime, or trade-off between budget and schedule objectives. Controlling also includes taking preventive action in anticipation of possible problems.

While the control phase's relationship to other project phases is relatively concise and clear, control is often difficult to implement as a formalized system. Project control is still important however, because a project is unlikely to be considered successful by stakeholders if it is not controlled effectively. Success in this context translates to metrics (project, cost, completion dates, etc.) and customer's expectations (features, functionality, performance, etc.).

- ▲ The two core control processes implemented during this project phase are the Performance Reporting and Integrated Change Control. There are several supporting processes interacting with these core processes as depicted below in Figure 1.7.

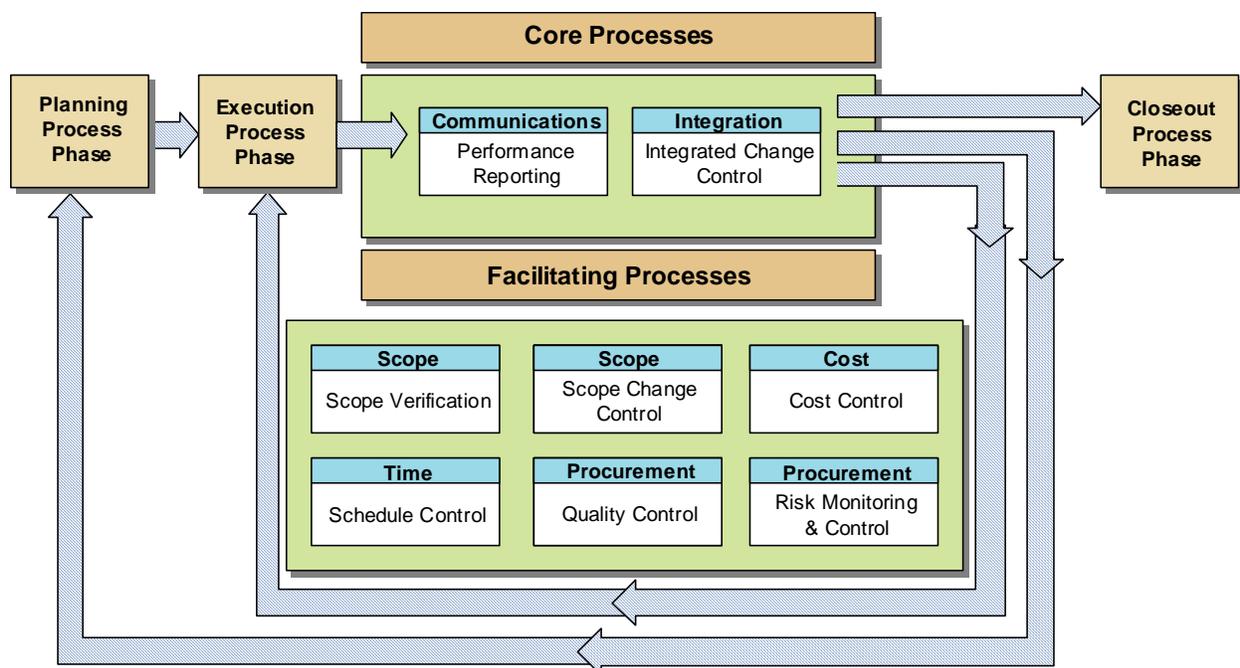


Figure 1.7: Project Control Phase Processes

Only by controlling a project can project progress and stakeholder's expectations be achieved in unison. Projects rarely fail because of one issue. Rather, failure is usually a collection of minor items that individually have negative impact in a specific project area. However, when looked at over the life of a project, these minor items can cause significant impact to cost, schedule, risk, and functionality and can manifest themselves as deviations from the original project plan.

As discussed in the planning phase section, the project plan will include the initially agreed upon baseline project schedule and budget. These become the primary tools for evaluating project performance.

1.5.5 Closing

The last major phase of a project's life cycle is the project closeout phase. Project closeout is performed after all defined project objectives have been met and the customer has formally accepted the project's deliverables and end product or, in some instances, when a project has been cancelled or terminated early. Project closeout is fairly routine, but it is an important process. By properly completing the project closeout, organizations can benefit from lessons learned and information compiled at closure.

The project closeout phase is comprised of two processes: contract closeout and administrative closure. These are depicted in Figure 1.8.

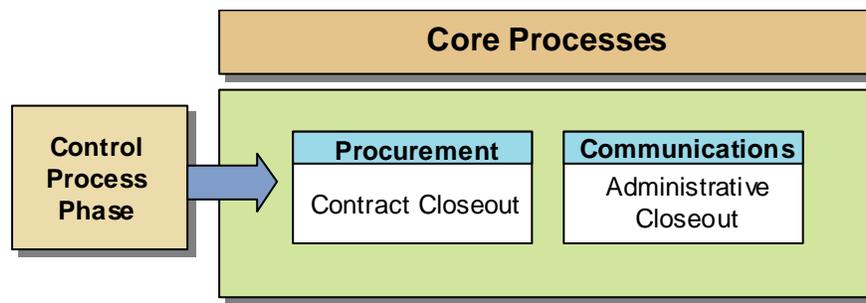


Figure 1.8: Project Closeout Phase Processes

Some of the key elements to project closeout are:

- ▲ Completion and closeout of any contractual agreements with suppliers or providers
- ▲ Formalizing customer acceptance
- ▲ Closeout of any financial matters
- ▲ Preparation of the project's final performance report
- ▲ Conducting a project review
- ▲ Documenting lessons learned
- ▲ Completing, collecting and archiving project records
- ▲ Celebrating project success.

1.6 Managing IT Projects Within The VA

The VA IT Project Management Framework diagram shown in Figure 1.9 illustrates the integrated process flow developed to insure a structured approach to product development within the VA as well as providing systematic checks and balances both annually and at critical points with the project life cycle.

This guide focuses on project management and the steps necessary to deliver a project within the constraints identified by the organization. It provides standard methods and guidelines to ensure the VA conducts projects in a disciplined, well-managed, and consistent manner promoting the delivery of quality products on time and within budget. As stated before, the application of project management is an iterative process.

For the purpose of this guide, a project takes place within the context of the organization and the business unit driving the work effort. Therefore, the project life cycle methodology reflects the structure of the organization and the type of project being undertaken. Because the capital needs and high-level feasibility studies are performed at the VA during the budget formulation and allocation processes, project life cycle will begin with project initiation and end with project closeout. The life cycle phases between initiation and closure encompass activities dictated by the type of project and the work complexity.

The VA IT Project Management Framework diagram is included at the beginning of each of chapter of the guide to illustrate the steps and related project management process groups.

1.7 Program (Investment) Life Cycle

The Program (Investment) Life Cycle integrates the project management and system development life cycles with the activities directly associated with system deployment and operation. By design, system operation management and related activities occur after the project is complete and are not documented within this guide. The program management life cycle is depicted and describe in the overall VA IT Project Management Framework to address the integration of OMB Exhibit 300 project (investment) management activities and the overall project budgeting process.

The VA IT Project Management Framework diagram illustrates Milestone 4 which occurs following the deployment of a system and the closing of the project. The project closing phase activities at the VA continues through system deployment and into system operation for the purpose of illustrating and describing the system activities the VA considers to be part of the project.

1.8 System Development Life Cycle

The System Development Life Cycle (SDLC) identifies the processes and tasks and their order that must be completed to produce and maintain a system throughout its life cycle. VA's SDLC is designed to produce systems in an evolutionary or incremental manner and not in a "big bang" or "all at once" manner. PMs should develop systems one increment at a time and one project at a time. Each increment—managed as a project—represents some but not all of the system's target capability. As each increment builds on the previous, the system's target capability is realized. In this way risk is reduced and the systems initial (and often most critical) capability is delivered faster. In addition, PMs should manage changes or enhancements to operational or production systems as new projects.

There are different approaches or methods to systems development such as waterfall, spiral, or iterative. These variations exist to address the various types of systems being developed and the

approach an organization chooses to develop. The project manager works with the systems design and development subject matter experts to determine the appropriate development methodology to apply within the overarching VA IT Project Management Framework. For example, multiple software development iterations or “spirals” could take place within Step 3 (System Development and Testing) of the Framework. (More on this topic is discussed in section 1.11 below.)

Project Managers need to address IT security threats and vulnerabilities early in the SDLC when the cost of implementing security controls and practices are relatively low and convenient to budget and schedule. Moreover, adherence to security-based software development practices will prevent deficiencies, rather than implement them after the fact. The cost to remediate a security weakness increases geometrically as a project moves through the SDLC.

VA’s SDLC must also include those activities which will ensure the incorporation of an adequate security control baseline into all phases of system development, operations, maintenance, and disposal. Including information system security early in the SDLC for an information system will usually result in less expensive and more effective security than adding security to an operational system. NIST Special Publication 800-64, Security Considerations in the Information System Development Life Cycle, presents a framework for incorporating security into all phases of the SDLC process, from definition to disposal.

The VA’s SDLC includes the following steps:

- ▲ Step 0: Concept Definition
- ▲ Step 1: Concept Development
- ▲ Step 2: System Design and Prototype
- ▲ Step 3: System Development and Testing
- ▲ Step 4: System Deployment
- ▲ Step 5: System Operation (including System Disposal)

1.9 VA IT Project Management Framework

The mapping of the VA IT Project Management Process and the PMI life cycle identifies the project management outputs for each VA IT project management step and milestone review. It also shows the project management process groups with corresponding actions and artifacts identified by PMI.

Figure 1.9 illustrates the actions and associated artifacts of the VA IT Project and Program Management process.

In addition, please see Appendix H for a high-level process flow chart that depicts the typical major actions, information flows, decisions, and roles for each step in the IT Project Management Process.

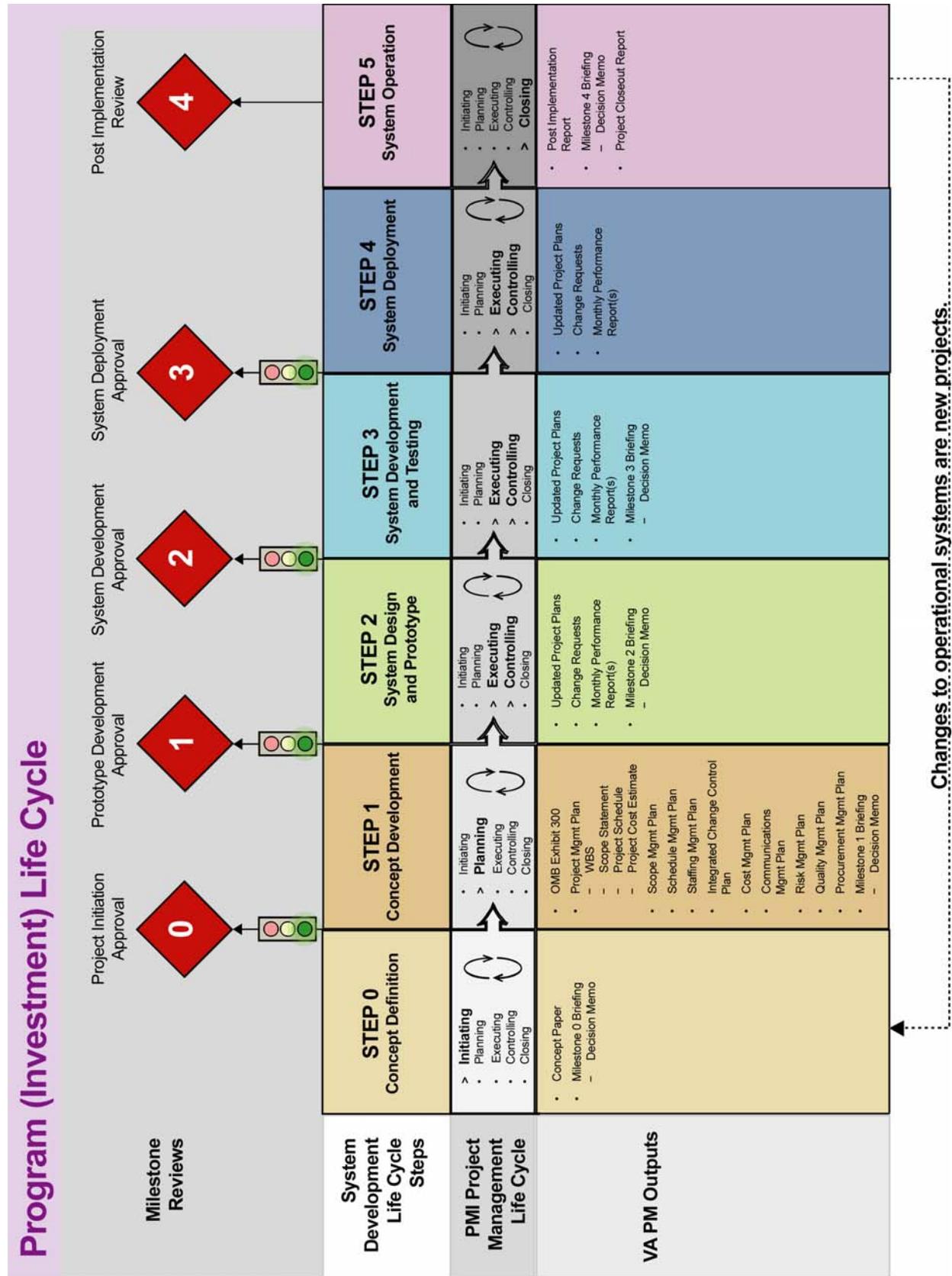


Figure 1.9: VA IT Project Management Framework

1.10 VA Project Management Tools

A Project Management Information System (PMIS) facilitates project information to flow within an organization. The software application is a core component of the overall PMIS and is considered to represent the tools and techniques used to gather, integrate, and distribute output of the other project management processes (e.g. project management outputs such as the overall project management plan and subsidiary plans).

Primavera's TeamPlay has been selected as the project management software for managing VA projects as well as VA IT OMB 300-level projects. TeamPlay is a unified project, process and resource management software that offers the combined benefits of managing projects, building and using standard methodologies and efficiently leveraging resources to deliver projects on time, on budget, and within scope. TeamPlay training is provided and supported by the VHA and VBA PMOs. Project managers and project team members receive ongoing support for TeamPlay project implementations from the administration PMO.

Project management tasks accomplished with TeamPlay:

- ▲ Develop the project WBS
- ▲ Develop a time-phased project budget
- ▲ Develop and control detailed project schedules based on deliverables and milestones
- ▲ Link schedules to budgets, resources and documents
- ▲ Track risks – assess and mitigate risks using simulations
- ▲ Set baselines for performance measurement
- ▲ Track manpower resources and requirements
- ▲ Produce schedule Gantt and PERT charts using report wizards
- ▲ Track and summarize multiple project data

TeamPlay is the primary method of providing the Project Manager performance measurement data. The TeamPlay data will be used to develop the inputs to the monthly performance reviews, Milestone briefings and Exhibit 300s. The Project Manager accomplishes this by entering the project WBS into TeamPlay. The WBS becomes the framework for a time-phased project budget and detailed project schedule. By comparing the budget with actual expenditures over time (schedule) the TeamPlay system can calculate earned value variances, estimates to complete and other performance measures. This data can produce project level reports and be rolled up to produce enterprise metrics such as those required for monthly performance reviews and milestone decision briefings.

While not utilized entirely for managing projects, the Capital Asset Management System (CAMS) is used by the 300-level Project Managers to input project data including project scope, schedule, cost performance, and risks as part of the annual budget submission internal to the VA and as a future output to OMB in the form of an Exhibit 300.

In general CAMS is used to establish, analyze, monitor, and manage VA's portfolio of capital assets (major programs). And because the portfolio is made up of projects managed individually by TeamPlay, the two systems are used in conjunction to manage VA's investments.

1.11 VA Milestone Review Process

VA's IT project management process is structured into discrete, logical steps separated by major decision points (called milestones). These milestones provide the basis for comprehensive management, progressive decision-making, and authorization of funding for each step in the process. These are to be used by projects in the IT Portfolio, for new projects, and those identified as high priority by the Deputy Secretary and the Strategic Management Council. The milestones require both written documentation and a briefing. The milestones include:

- ▲ Milestone 0 – Project Initiation Approval
- ▲ Milestone 1 – Prototype Development Approval
- ▲ Milestone 2 – System Development Approval
- ▲ Milestone 3 – System Deployment Approval
- ▲ Milestone 4 – Post Implementation Review

Each milestone builds upon the information provided in the previous milestone and increases in detail. The number, sequence, and timing of milestone decision points shall be tailored to meet the specific needs of individual programs. For example, some milestones can be combined (e.g., I and II), especially for projects that are not systems development efforts, but rather are efforts to establish an IT service. In addition the time between milestones can be shortened and the milestones (and the SDLC steps between milestones) can be iterated (e.g., IIa, IIIa and then IIb, IIIb, etc.), especially for iterative or spiral system development efforts.

VA's Enterprise Architecture (EA) must be linked with the milestone review process in order to ensure projects remain aligned and synchronized with the EA throughout their life cycle rather than just at the outset when an investment decision is initially justified. Several of the milestones refer to documenting specific parts of the Zachman framework. The Zachman framework is the tool VA is using to build its EA, an explicit description and documentation of the current and desired relationships among program/business and management processes and IT. The framework describes the data, functions, network, people, time, and motivation for the project, from different perspectives. Information on the Zachman framework can be obtained from the VA Office of Enterprise Architecture.

All IT project milestone reviews that are to be provided to the Enterprise Information Board are scheduled by OI&T's IT Oversight and Review Services (005P3). After the Project Manager has received their Administration's or Staff Office's approval to schedule a briefing, the Project Manager submits a request to the IT Oversight and Review Service, which will provide the Project Manager with a template for creating the project milestone briefing slide package. The Project Manager returns the completed slide package for review and briefing scheduling.

See appendix G for more detailed guidance on the milestone review briefings and process.

1.11.1 Milestone Decision Memo

Following the milestone decision briefing the project decision authority will sign a project decision memorandum that provides information pertaining to the meeting. The decision

memorandum will be forwarded to the appropriate Deputy Chief Information Officer or Staff Office official. The memorandum will include the briefing date, background/discussion material, any required action items, and the CIO decision regarding the project. A status report and estimated completion dates for the required actions will be requested as noted in the memorandum.

See appendix G for a sample Milestone Decision Memo.

1.12 In-Process Reviews

In-Process Reviews are briefings that are provided to the Enterprise Information Board (EIB) because a project is either experiencing problems or variances that are outside tolerance levels or because the time span between milestone reviews is too long to allow the EIB to conduct adequate, timely oversight and control on the project. In-Process Reviews are scheduled by OI&T's IT Oversight and Review Services (005P3). See appendix G for more information.

1.13 Monthly Performance Review

Performance reviews are conducted monthly on all projects listed in the VA IT portfolio of projects (also identified in the OMB Exhibit 53). Using a template, the Project Manager provides to OI&T an assessment of project performance in each of the following areas: acquisition requirements, funding, staffing, schedule, budget and quality. OI&T summarizes the performance data and presents it to the Strategic Management Council at the monthly performance review.

The performance review template is divided into three categories with a Project Manager completing the category appropriate to the project. The table below shows the categories and the project status or type for each category:

Worksheet Category	Project Status/Type
Development Performance Metrics	Projects which have completed Milestone 1 (Prototype Development Approval) or milestone 2 (System Development Approval)
Sustainment Performance Metrics	Projects that have completed Milestone 3 (System Deployment Approval) or Milestone 4 (Post Implementation Review)
Enterprise Program Performance Metrics	OMB 300 initiatives which do not involve the development of an IT system, i.e., they are program oriented and the milestone review criteria do not apply to them.

Each worksheet category reports the same metric areas listed in the first paragraph with the exception that enterprise programs do not report milestone or system related metrics. Scoring a project depends on where it is in the development life-cycle. Projects early in the cycle are weighted heavily in the acquisition requirements area, while funding will be given a lesser weight. The weighting changes as the project moves forward. Later in the life-cycle, acquisition requirements are weighted less and other areas such as Cost and Schedule increase. As the project nears closeout, the emphasis will be on quality performance. The overall score is influenced by scores in primary categories like acquisition requirements, funding and staffing.

The worksheet color codes each area and overall scores with green, yellow, orange, and red according to the score values.

To complete the template, the Project Manager scores each metric from the drop down menu. A color is chosen based on the metrics shown under the Ratings column. The colors are automatically translated into values and the overall score is determined.

See appendix F for more detailed guidance on the monthly performance review process.

CHAPTER 2 – ROLES AND RESPONSIBILITIES

It is important to have a defined formal structure for the project and for the project staff. This provides each individual with a clear understanding of the authority given and responsibility necessary for the successful accomplishment of project activities. Project team members need to be accountable for the effective performance of their assignments and achievement of the project goals and objectives.

A successful project requires that the project team have the authority to complete a project, be participants (at some level) in the planning process, have ownership and buy-in to the project plan, and be responsible and accountable for completion of the project.

The roles and responsibilities of project participants will vary. The requirements placed on participants will be determined and defined during the project planning process phase, however, the following is a good “rule of thumb” perspective:

- ▲ On a large project, individual role assignments may require full-time attention to the function.
- ▲ On smaller projects, role assignments may be performed part-time, with staff sharing in the execution of multiple functions.
- ▲ Tasking and individual responsibilities are often covered in the Organizational Breakdown Structure (OBS) as activity assignments are defined during the planning phase. Typically these assignments are shorter term and exist only to the completion of the activity deliverable.

2.1 The Project Team and Stakeholders

A project team includes a diverse combination of people and skills who share the responsibility for accomplishing project goals.

Stakeholders are individuals and organizations who have a vested interest in the success of the project. The identification and input of stakeholders help to define, clarify, drive, change, and contribute to the scope, cost, timing, quality and, ultimately, the success of the project.

To ensure project success, the project management team needs to identify stakeholders early in the project, determine their needs and expectations, and manage and influence those expectations over the course of the project.

Stakeholders on every project include:

- ▲ Organizational Management, who define business needs, goals and objectives of the project as well as defining the policies and procedures governing the project
- ▲ The Project Manager, who has ultimate responsibility for project success
- ▲ The Project Team members, who are responsible for managing the performance of the project work activities. These could include:
 - Project management staff

- Business development staff
- Subject Matter Experts (SME)
- Documentation (user and technical) staff
- Training staff
- Technical staff
- Information Security Officer (ISO), please see Appendix I for more information on the duties of the ISO.
- Leaders/decision makers
- ▲ The Project Sponsor, who leads in getting the need for the project recognized as well as providing funding, enabling the resource staffing, and certifying the security of IT applications.
- ▲ The Customer, who is the person(s) or organization(s) using the product of the project and who determines the acceptance criteria for the product

2.2 Organizational Management

Organizational Management is responsible for the identification of the need and opportunity for a project, assessment of project risk, and the approval of the project's feasibility and resources. They are also responsible for establishing the strategic plans and for validating that projects are consistent with customer and organizational requirements. Management provides close oversight for high risk or high cost projects.

2.2.1 Management Roles and Responsibilities

General Functions

- ▲ Provide leadership and resources to establish and improve project management
- ▲ Ensure that sufficient resources are available to conduct projects
- ▲ Review/approve commitments to external entities (e.g., customers, vendors)
- ▲ Ensure staff is properly trained in project management techniques and principles

Project Initiation

- ▲ Select Project Manager and assist in project team staffing
- ▲ Review/validate/approve project charter
- ▲ Authorize and provide funding

Project Planning

- ▲ Verify that project goals and objectives are defined
- ▲ Review/approve project plan, cost, risk and establish management reserves

- ▲ Provide management oversight as predicated by review of the project risk analysis, risk response planning and project plan
- ▲ Enable project staff availability

Project Execution

- ▲ Regularly conduct executive management reviews and provide oversight

Project Control

- ▲ Review project status and corrective action plans (if required)
- ▲ Review/Approve changes affecting scope, timing, cost, and/or quality, as required
- ▲ Project Close-out
- ▲ Validate project completion (goals & objectives)
- ▲ Verify customer and sponsor acceptance
- ▲ Review and close project accounting/financial files
- ▲ Review project lessons learned and post project reports for continuous improvement action

2.3 Project Sponsor / Business Sponsor

The Project Sponsor is usually a member of the management team who will be the recipient of the project's end result (the product). The Project Sponsor is typically the head of a program area. This individual makes the business argument for the project to exist, controls the overall funding of the project and defines the acceptance criteria of the product. VA Directive 6214, Information Technology Security Certification and Accreditation, identifies security related responsibilities for the System Owner. Please see Appendix I for more information on Certification and Accreditation.

2.3.1 Sponsor Roles and Responsibilities

General Functions

- ▲ Articulate project and/or customer requirements
- ▲ Validate that project requirements are met
- ▲ Provide the necessary funding and resources as appropriate
- ▲ Champion the project to provide exposure and buy-in
- ▲ Communicate the sponsor's views on project progress and success factors to the project team and other stakeholders

Project Initiation

- ▲ Provide the strategic goals and objectives of the recipient organization and guidance to the project team to identify the relevance and value of the project
- ▲ Develop project concept document

- ▲ Define sponsor and organizations needs
- ▲ Obtain or provides funding for the project
- ▲ Document requirements

Project Planning

- ▲ Review and approve the Project Management Plan and management approach
- ▲ Participate in planning sessions

Project Execution

- ▲ Attend executive requirement reviews
- ▲ Resolve escalated project requirements issues, removes barriers and obstacles to the project
- ▲ Provide written agreement to project requirements and qualifying criteria

Project Control

- ▲ Attend and participate as needed at Project Status Reviews and steering meetings
- ▲ Attend change control meetings and reviews and approves change in scope, timing, quality and/or cost as impacted

Project Close-out

- ▲ Provide representation or input to lessons learned reviews
- ▲ Sign off on project completion

2.4 Program Manager

The terms “program” and “project” management are often used interchangeably. However, within this document the two terms and concepts are separate and distinct. Program management is defined as a group or series of related projects and ongoing systems/applications managed in a coordinated way to achieve resource, cost and quality efficiencies not available to individual projects. Programs generally support strategic goals and objectives, while projects may be more targeted in focus. The program manager has responsibility for the management of a series of related projects and the management of the corresponding Project Managers. VA Directive 6214, Information Technology Security Certification and Accreditation, identifies security related responsibilities for the Program Manager.

2.4.1 Program Manager Roles and Responsibilities

General Functions

- ▲ Plan, organize, staff, direct, control and coordinate
- ▲ Recommend composition of own program team
- ▲ Own and guide the program
- ▲ Reward and recognize performance

- ▲ Is accountable for cost, schedule, quality and scope
- ▲ Resolve any outstanding issues among the project teams that cannot be resolved within the team
- ▲ Is responsible for overall resource allocation for Project Managers assigned to the program
- ▲ Maintain ongoing communication with the project managers from the program management level perspective
- ▲ Communicate project status to fellow program managers
- ▲ Ensure IT applications are developed consistently with the software development life cycle
- ▲ Ensure projects are managed in accordance with the recommendations for project management as outlined in the VA Project Management Guide
- ▲ Ensure that IT security certification and accreditation (C&A) requirements are met.

Project Initiation

- ▲ Assign Project Manager and assist in project team staffing
- ▲ Review/validate/concur in project charter
- ▲ Validates and communicates individual project objectives

Project Planning

- ▲ Verify that project goals and objectives are defined
- ▲ Verify that project is aligned with the strategic goals of the program
- ▲ Review/concur with project plan, cost, risk and establish management reserves
- ▲ Provide guidance in cost and schedule development
- ▲ Ensure project staff availability
- ▲ Conduct routine program planning sessions as defined by individual's organization

Project Execution

- ▲ Conduct regular scheduled project reviews

Project Control

- ▲ Review project status and corrective action plans (if required)
- ▲ Review, concur and participate in milestone review briefings
- ▲ Review/concur in changes affecting scope, timing, cost, and/or quality, as required
- ▲ Prioritize any changes to project scope

Project Close-out

- ▲ Review whether stated improvements or benefits were realized from the project
- ▲ Assure customer and sponsor acceptance is obtained

- ▲ Review and concur in project accounting/financial file closeout documents
- ▲ Review project lessons learned and post project reports for continuous improvement action

2.5 Project Manager

The Project Manager has overall project responsibility. In order to achieve success, the Project Manager should work closely with the Sponsor with respect to staffing requirements and funding availability. The Project Manager is responsible for completing the project on time, within budget, and meeting the quality criteria and requirements.

The Project Manager should be assigned as early as possible in the life cycle of the project in order to establish project ownership and management responsibility as well as to begin the development of the project requirements from the “ground up.”

2.5.1 Project Manager Roles and Responsibilities

General Functions

- ▲ Comprehend and implement organizational project policies and procedures
- ▲ Maintain project staff technical proficiency and productivity, and provide training where required
- ▲ Establish and maintain project quality
- ▲ Identify and procure project infrastructure needs
- ▲ Develop Project Charter and obtain approval
- ▲ Define project goals, objectives and success criteria
- ▲ Identify and document project constraints
- ▲ Identify and document project assumptions
- ▲ Identify and secure project team resources
- ▲ Serve as focal point for project communications
- ▲ Develop and present Milestone review briefings
- ▲ Ensure that IT security C&A requirements are met

Project Planning

- ▲ Develop Project Plan, tailoring the PMIS to reflect project needs. The Project Plan should include the Project Charter, Scope Statement, constraints, assumptions, WBS defining project deliverables, cost estimates and project budget, major milestones, schedule, resource requirements, acquisition/procurement plans, risk analysis and response plans, project team structure and communications plan. Also included will be the deliverables acceptance criteria (quality metrics) and the acceptance process.
- ▲ Develop the supporting plans such as scope, cost, risk, schedule, quality, resource, security deliverables, procurement and change management plans

- ▲ Obtain stakeholder approval and acceptance of the Project Plan
- ▲ Obtain organizational commitment and support for completion of project task assignments, timing and quality
- ▲ Establish baseline
- ▲ Translate documented requirements into appropriate SDLC documentation (e.g., requirements document)

Project Execution

- ▲ Manage and monitor day-to-day activity and provide direction to team members and supporting organizations
- ▲ Manage to and monitor quality targets and goals (both project and product)
- ▲ Manage and monitor risk response strategies
- ▲ Disseminate project information and maintain communication
- ▲ Develop and update system security plan and other security deliverables
- ▲ Manage, or support, procurement process and contract administration requirements

Project Control

- ▲ Develop and distribute project performance reports. Regularly review project status, evaluating performance criteria (scope, cost, schedule & quality)
- ▲ Develop and manage corrective action plans
- ▲ Evaluate project performance and initiate change requests as required (scope, cost, schedule or quality)
- ▲ Participate in change control board to review and approve product/project changes
- ▲ Review project risks and establish risk response plans
- ▲ Adjust project planning, as required, to include approved changes in scope, timing, cost or quality after obtaining customer approval

Project Close-out

- ▲ Obtain customer and management approval and acceptance of completed product
- ▲ Complete contract closeout
- ▲ Closeout open action items
- ▲ Develop post-implementation report
- ▲ Conduct lessons learned session and develop recommendations for continuous improvement
- ▲ Close out any financial accounts or charge codes
- ▲ Archive all project data
- ▲ Recognize project team and celebrate success

2.6 Project Team

The Project Team is responsible for performing the project activities. Project Team members, as required, may assist the Project Manager with planning the project (ex. scope and WBS) and they may also assist with obtaining commitments to complete the project within established schedule and budget constraints. Customers and/or stakeholders should interact with the Project Team to ensure that requirements are properly understood and implemented.

2.6.1 Project Team Roles and Responsibilities

General Functions

- ▲ Identify product alternatives
- ▲ Complete the project within budgeted cost, schedule and quality requirements
- ▲ Support project planning and control
- ▲ Participate in identifying, mitigating, and monitoring project risks

Project Initiation

- ▲ Provide estimates for product deliverables
- ▲ Review customer requirements for feasibility and available resources
- ▲ Analyze requirements for clarity (unambiguous), completeness and consistency

Project Planning

- ▲ Develop technical approach
- ▲ Participate in the development of the project plan
- ▲ Identify tools needed for project
- ▲ Identify staff training needs

Project Execution

- ▲ Create product and process solutions
- ▲ Conduct or participate in internal and external reviews
- ▲ Provide quality assurance support
- ▲ Manage work effort to maintain on time, on cost and on quality result
- ▲ Identify any project roadblocks, barriers or unanticipated risk events

Project Control

- ▲ Track the project execution effort and submit status reports (scope, cost, and schedule)
- ▲ Maintain project and product quality requirements
- ▲ Identify and react to risk events as they are identified or occur
- ▲ Participate in change control reviews

Project Close-out

- ▲ Participate in lessons learned sessions
- ▲ Identify ways to improve project processes or products (continuous improvement)
- ▲ Turnover all project related documentation to the Project Manager for archiving

2.7 Customer

A Customer is responsible for communicating project needs and verifying that requirements have been met at project completion. A Customer may be internal, external or both.

2.7.1 Customer Roles and Responsibilities

General Functions

- ▲ Articulate customer requirements
- ▲ Validate that project requirements are met
- ▲ Support and conduct staff training programs as required to make certain that the staff is “ready to accept” the new product
- ▲ Be proponents of the new product to the customer organization

Project Initiation

- ▲ Clearly define customer needs and requirements to the Project Manager and project team

Project Planning

- ▲ Review and approve project plan
- ▲ Attend and participate in project requirement reviews
- ▲ Assign customer personnel as project points of contact
- ▲ Provide written agreement on requirements and qualifying criteria
- ▲ Provide input into deployment planning

Project Execution

- ▲ Review project status reports
- ▲ Provide project support infrastructure as required

Project Control

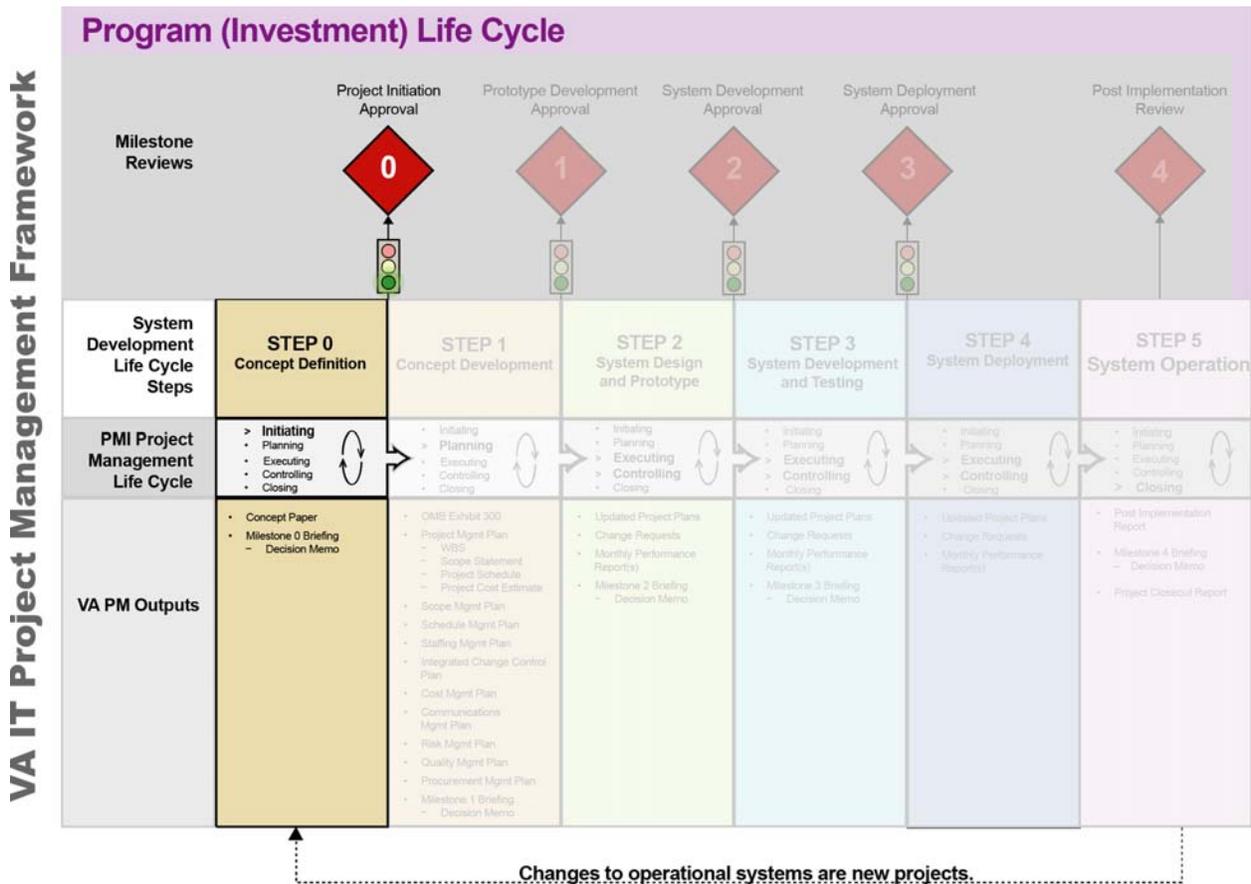
- ▲ Participate with project team developing corrective action plans addressing variances in time, cost or quality
- ▲ Communicate identified issues associated with project performance or product
- ▲ Validate quality assurance of deliverables
- ▲ Participate in change control process

- ▲ Review and approve or escalate project changes affecting scope, time, cost or quality

Project Close-out

- ▲ Provide representation or input to lessons learned reviews

CHAPTER 3 – CONCEPT DEFINITION



3.1 Step 0: Concept Definition

In Step 0, the predominate PMI process group is Initiating. (See Appendix B for a detailed discussion of the Initiating process group.) The purpose of Concept Definition is to evaluate projects proposed for the next planning cycle and to reach consensus from the EIB or the appropriate senior leadership to proceed with the project. During this phase in the VA IT Project Management approach, it is important to have a clear understanding of the problem that needs to be solved and how solving that problem supports a strategic objective of the Department.

The Project Concept Paper defines the project’s reason for being and ensures the project is consistent with the VA’s business plan. It defines a high-level approach and other top-level planning information. Ideally, the information contained in the Concept Paper provides management with the information necessary to decide if the project can be supported. The Concept paper should not be a collection of product or process deliverables, but it should define what is to be done, why it is to be done, and what business value it will provide to the VA when the project is completed.

New IT projects/initiatives require submission of Concept Papers and acceptance of the Concept Papers at a Project Initiation Milestone 0 Review. Each paper is meant to be a high-level,

conceptual description of new proposed projects that broadly identify project goals and benefits. Once the Concept Paper is submitted, a Milestone 0 review will be scheduled with the Enterprise Information Board (EIB). A decision to proceed by the EIB authorizes the submitting office to prepare a “planning” or “full acquisition” Capital Asset Plan and Business Case (OMB Exhibit 300).

If a new IT project/initiative is not approved during the Milestone 0 review, the originating office will have 14 calendar days to reschedule and conduct the review. Rescheduling a review will not postpone the date for completion of the OMB Exhibit 300 in Capital Asset Management System (CAMS). The results of all Milestone 0 reviews will be reported to the Strategic Management Council. A sample Concept Paper can be found in the Appendix.

The primary task of the concept definition step is the “initiating” or “chartering” of the project. The PM documents produced during concept definition serve as the equivalent of what PMI would call a project charter. The project charter process at the VA has several steps and incorporates several organizational-specific documents. These include the Concept Paper, Milestone 0 Review Briefing, and the Milestone 0 Decision memo. Combined, these documents:

- ▲ identify the business need for the project,
- ▲ give the Project Sponsor, Business Sponsor, and/or Project Manager (if one has been assigned to the project yet) the authority to expend resources necessary to lead the project into the next phase or step in the life cycle,
- ▲ describe the project,
- ▲ provide a mapping of the project goals to the enterprise goals, and
- ▲ provide a high-level discussion of the project’s work breakdown structure, schedule, major risks, benefits, critical success factors, acquisition strategy, IT security, and order of magnitude life cycle cost estimates.

A VA project is considered to be “chartered” once these three artifacts exist and the project has been received Milestone 0 approval from the EIB or appropriate senior management.

3.2 Milestone 0: Project Initiation Approval

Milestone 0 is intended to have the Project Sponsor, Business Sponsor, or Project Manager address the basic areas necessary to warrant project initiation approval. It does not presume any significant prior investment in analysis (either business or technical), concept or requirements definition or design; rather, it seeks answers to these most basic questions even before committing to that level of investment. The Project Manager should have a clear understanding of the problem that needs to be solved and how solving that problem supports a strategic objective of the Department. Based on a successful Milestone 0 review, the Project Manager will be authorized to expend the resources necessary to establish the project’s business case and prepare for the project’s Milestone I review.

The main steps that need to be taken to reach the project initiation approval include preparing the Concept Paper, and conducting the Milestone 0 Decision Briefing.

Preparing the Concept Paper: The Concept Paper information basically documents the business problem and proposed technical approach. The document should be brief, providing a high-level justification for the project, giving enough information to determine if the project should continue onto the next phase.

After the appropriate Administration or Staff Office approval, the Concept Paper will be submitted to the CIO for review. The reviewing official will determine whether the project should go forward to EIB or be tabled, reworked, scrapped or refined.

Preparing the Briefing: In addition to the documentation, a briefing needs to be given to the Enterprise Information Board (EIB). If the project is approved to go forward and is approved by the EIB, an Exhibit 300, either Planning or Full Acquisition, will need to be developed for the next milestone.

Once a concept is approved, the project team will need to complete a more detailed life cycle cost estimate, breaking out acquisition and recurring costs for each year of the project, in order to provide sufficient information to prepare and justify a budget request.

3.3 Project Manager Selection

The Project Manager is responsible for project cost, schedule and performance. Selection of the project manager should be based upon qualifications and experience commensurate with the size, complexity and profile of the project. All OMB Exhibit 300 level projects must have a VA Level III certified project manager and alternate project manager assigned. A VA Level II certified project manager should be assigned to projects of medium to large size/complexity or to those subprojects that fall under an OMB Exhibit 300 initiative. VA Level I certified project managers are qualified to manage small projects with a short duration. The project manager should be selected as early in the project life cycle as possible.

The Project Manager should have broad authority over the entire project. Senior management should empower the Project Manager to take actions necessary to complete the project successfully. This includes the authority to make design decisions during development, as well as the ability to control requirements, budget, schedule, resources, and product quality.

Assignment of the Project Manager should take place as early as possible. It is especially important the Project Manager conduct the planning phase of the project. The Project Manager's understanding of the project's planning process and trade-offs can be invaluable to team members and matrixed support personnel as they come on-board. That understanding of 'how we got here' will also have a beneficial impact on the decisions made during project execution.

3.4 One VA Enterprise Architecture

From the perspective of the One-VA EA, at Milestone 0, PMs are expected to focus on the information relevant to their respective proposed new projects in row 1 of the EA Zachman Framework. This information is described in Chapter 3 of version 2.1 of the One-VA Enterprise Architecture. Chapter 3 provides a delineation of the business of the Department from a business-focused, top-down, enterprise-wide perspective.

3.5 IT Operations Considerations

Projects that will involve VA's telecommunications and operations infrastructure should consider the following questions leading up to Milestone 0:

Network Capacity Planning:

- ▲ Will the project use the data network for its operation?
- ▲ What is the project's conceptual data network environment?
- ▲ What metrics were used to define this environment for appropriate network execution?
- ▲ Has this been provided to the Capacity Planning group?

3.6 Step 0: Significant Project Management Activities

The following is a summary listing of the significant project management activities and outputs for Step 0.

- ▲ Concept Paper
- ▲ Milestone 0 Briefing and Decision Memo
- ▲ Project Manager Selection

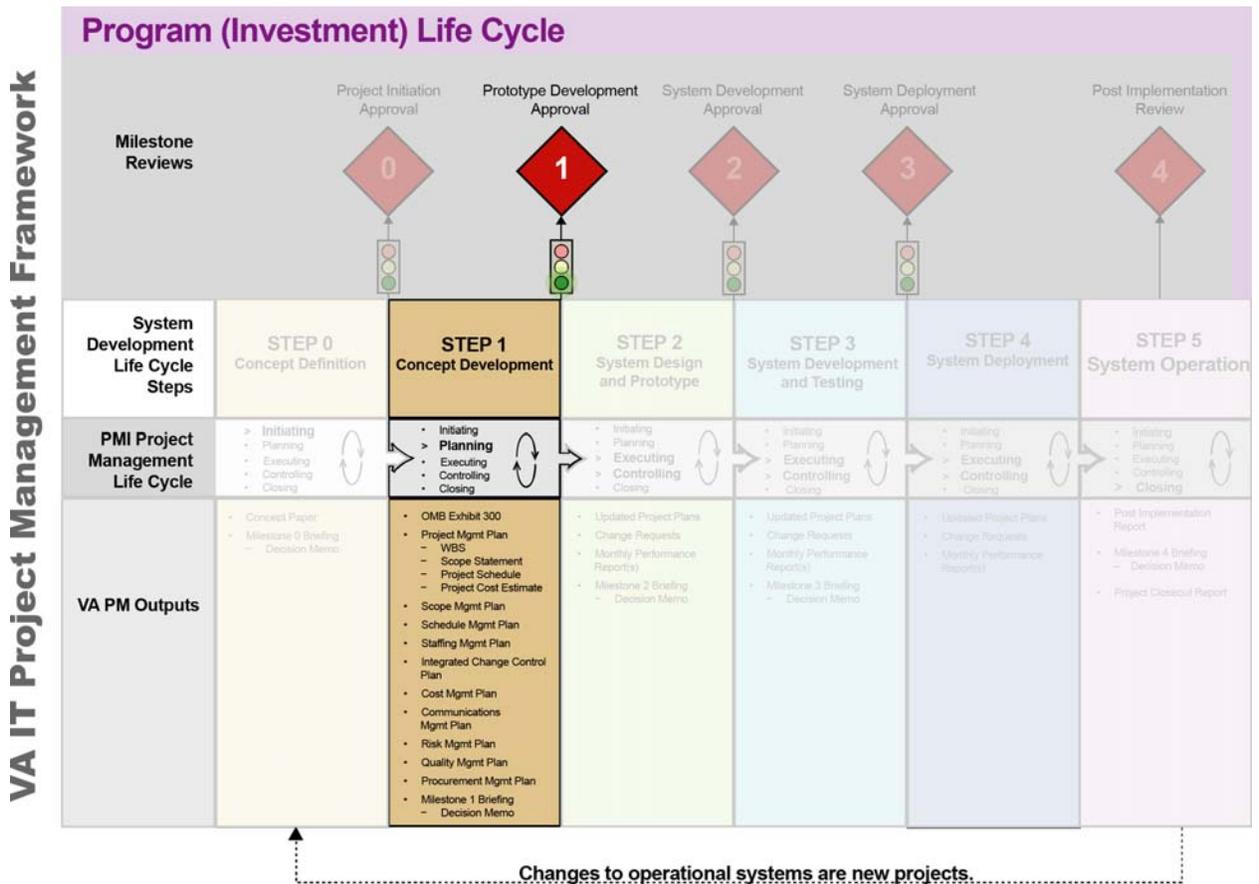
3.7 Step 0: Responsibility Assignment Matrix

The Responsibility Assignment Matrix below is provided as a "best practices" tool that the PM can adapt and fill out for the appropriate tasks and responsibilities of his or her project. For additional guidance, the PM should refer to the appendices of this guide and consult his or her Administration or Staff Office PMO.

Step 0 - Concept Definition							
Deliverable /Artifact	Task	Responsible					
		D = Develop or Designate, S = Support, C = Concur, A = Approve					
		Business Sponsor	Program Manager	Project Manager	Project Team	Stakeholders / OI&T	VA EIB / SMC
Concept Paper	Describe Statement of Need						
	Describe how the project will solve the problem						
	Describe acquisition strategy						
	Determine and describe costs for five year rough order of magnitude						
	Determine and describe rough cost estimate for total project						
	Describe benefits the project will bring to the organization and VA						
Milestone 0 Briefing	Create briefing slides						
	Seek Administration or Staff Office approval						
	Schedule EIB briefing with OI&T						
	Present briefing to EIB						
Milestone 0 Decision Memo	Draft Decision Memo						
	Sign Decision Memo						
	Accomplish Decision Memo tasks						

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CHAPTER 4 – CONCEPT DEVELOPMENT



4.1 Step 1: Concept Development

In Step 1, the predominate PMI process group is Planning. (See Appendix B for a detailed discussion of the Planning process group.) During Concept Development, the project manager accomplishes the detailed planning to prepare for project execution. It is here that the project manager develops the project management plan, including the project Work Breakdown Structure (WBS) that communicates the specifics of the project scope and the requirements of the product or service that the project will produce. With an understanding of the project scope the team prepares the project master schedule and time phased budget that become the basis for project performance measurement (such as earned value management). During the concept development phase processes are put in place that will insure close control over the project scope, schedule and budget. Other processes are initiated to identify and assess project risks and insure product quality. Specific strategies are developed for the acquisition of project labor and materials.

It is during this phase that the project manager or project sponsor ensures senior officer and business owner approval of the project scope, schedule, budget, risks, acquisition strategy, and product requirements. A best practice is to have the appropriate senior officer(s) and business

owner actually sign the Project Management Plan and subordinate plans that contain the above information.

Important distinctions exist between Step 1 Concept Development tasks and the tasks required to prepare and communicate information for the Exhibit 300 process (See Appendix D for a more detailed discussion of the Exhibit 300). The major distinction is that the Step 1 Concept Development process is goal driven, with milestones being reached after intermediate project goals are achieved; while the Exhibit 300 process is an annual process, requiring actions throughout the year to meet OMB submission dates. In the Step 1 Concept Development phase the project plans are created to control the project. This is also the period of time when the groundwork is laid for Exhibit 300 reporting by entering the project planning data into TeamPlay project management software.

4.2 Milestone I: Prototype Development Approval

The Milestone I review is intended to have the Project Manager address areas necessary to warrant approving the commitment of resources to a prototype or pilot effort. At Milestone I, the PM demonstrates a well-founded business case for the effort. Prototype efforts are encouraged within VA, as a general principle, in order to speed time to market and to increase the likelihood that the delivered product will fit the end users' true needs. For certain projects, the project requirements and maturity of the technology will have already been established. In these cases, the project may proceed to a combined Milestone I/II review.

Milestone I includes development of the Exhibit 300, either a "Planning Application" or a "Full Acquisition". The applications can be combined depending on whether preliminary funding or full funding is being requested.

If preliminary funding for project development is needed, a preliminary Exhibit 300, the "Planning Application" should be prepared. The "Planning Application" will be reviewed by the Office of Information and Technology (technical review), the EIB Panel (strategic and financial review), the EIB, and the SMC (if required) for approval and funding.

If full funding is needed for the upcoming budget year a complete Exhibit 300 "Full Acquisition" should be prepared. The Exhibit 300 will be reviewed by the Office of Information and Technology (technical review), the EIB Panel (strategic and financial review), the EIB, and the SMC (if required) for approval and funding.

Planning Application (Exhibit 300) for Preliminary Funding: The Planning Application further defines this concept. It also includes a high-level evaluation of alternatives for an IT solution. The document should address functional, security, performance, and reliability requirements, concept of operations, high-level use cases, business case, technical approach, acquisition, testing and fielding strategy, training and documentation requirements, schedule, staffing, and skills requirements. Comparisons of alternative concept solutions normally result in identification of the most promising system concept. The Exhibit 300 also needs to include Return-on-Investment and Cost Benefits analysis estimates.

If the project is approved, preliminary funding will be provided and the project will be included in the budget request. The, Full Acquisition Exhibit 300, will be required for the project by the following summer, before the budget year for which it is funded begins. This should document in more detail the scope, schedule, cost resource requirements, test strategy, risk profile and mitigation plan, project organization and staffing, operational support strategy, detailed life-cycle cost, and detailed business case. OMB Circular A-11, Part VII, Section 300 provides full instructions for this document.

Concept Development for Full Funding: If full funding is needed for the upcoming budget year a complete Exhibit 300 (“Full Acquisition”) should be prepared. At Milestone I, additional documentation (in addition to the information from Milestone 0) is required that supports Exhibit 300, such as:

- ▲ Completed Row 2 of the Zachman Framework, VA’s business processes from the perspective of VA line and staff managers, --revalidating the information relative to the EA addressed in the Milestone 0 review, showing how the project fits into the allocated functional baseline and integration points established in row 2 of the framework. In addition, the Project Manager is expected to take the functional requirements and integration points contained within row 2 and the Technical Reference Model (TRM) and standards profile and begin development of the functional and technical requirements baseline for their project that is the subject of row 3 of the framework, the IT system from the perspective of the Project Manager.
- ▲ An initial change management and communications plan
- ▲ A project organization plan and staffing inventory
- ▲ An updated mapping of the project concept to VA Performance Goals
- ▲ A prototype development work plan and staffing schedule

In addition, the project may need to be presented to the SMC, and OMB, if required.

4.3 IT Security

4.3.1 System Security Plan (SSP). The SSP documents the security risks (not project risks) and overall system security categorization in terms of potential level of impact (Low, Moderate, High) for each of the security objectives of confidentiality, integrity, and availability of federal information and information systems. The plan documents the security processes that will be implemented and tested in the Security Controls Assessment (SCA) plan. The SCA plan is the basis for System Certification and Accreditation and acceptance of residual security risk. The System Security Plan includes the following components:

- ▲ **System Boundary Summary** – Describes what constitutes the system for the purposes of the SSP.
- ▲ **IT System Security Categorization and Sensitivity** – The System Security Categorization classifies the system as a Major Application or a General Support system. The Security Sensitivity identifies the potential level of impact as Low (limited impact), Moderate (serious impact), or High (severe or catastrophic impact) for confidentiality, integrity, and availability of federal information and information systems. The

categorization and sensitivity determines the minimum management, operational, and technical security controls required for information and information systems. See Federal Information Processing Standards (FIPS) 199 – Standards for Security Categorization of Federal Information and Information Systems.

(<http://csrc.nist.gov/publications/fips/fips199/FIPS-PUB-199-final.pdf>). Guidance on the use of FIPS 199 can be found in NIST Special Publication 800-60.

- ▲ **4.3.2 Configuration Management Approach** – Develop the approach for managing change over the development and production life cycle of the system – application and operating system software, configuration settings, interfaces, and hardware. Note: A security risk assessment differs greatly from a project risk assessment. A security risk assessment assesses the security risks to the information system itself whereas a project risk assessment assesses the project risks.

4.3.3 Contingency and Disaster Recovery Approach – Prepare an approach for responding to man-made or natural incidents or disasters.

4.3.4 Federal Information Security Management Act (FISMA) Self-Assessment and Plan of Action and Milestones (POA&M). FISMA requires the completion of an annual self-assessment to identify security deficiencies. The VA has an automated tool to facilitate completion of the survey and tracking of deficiencies in the form of POA&M that are submitted to OMB quarterly. OMB guidance also requires POA&Ms to be addressed by system owners/program managers in order to obtain a security score of 4 in the Exhibit 300 process.

4.3.5 Preliminary Security Risk Assessment. The basic assessment of the confidentiality, integrity, and availability risks that help determine what security controls are necessary to protect the information contained in this information system. Completing the FISMA self-assessment constitutes a preliminary risk assessment.

See Appendix I for Federal and VA-specific guidance on IT Security deliverables for this stage.

4.4 Privacy Impact Assessment

The E-Government Act of 2001 (E-Gov) requires a Privacy Impact Assessment (PIA) to be conducted for any new information collections. Primarily, the PIA formalizes and documents how private data is to be protected. It must describe:

- ▲ What information is to be collected,
- ▲ Why the information is being collected,
- ▲ The intended use of the information,
- ▲ With whom the information will be shared,
- ▲ What notice or opportunities for consent would be provided to individuals regarding what information is collected and how that information is shared,
- ▲ How the information will be secured, and
- ▲ Whether a system of records is being created under the Privacy Act (5 U.S.C. 552a)

The PIA is to be initiated in the early stages of system development and completed as part of the required System Development Life Cycle reviews. Privacy must be considered when requirements are analyzed and decisions are made about data usage and system design.

Details on the PIA, its privacy principles, and steps for completing one can be found at: http://www.cio.gov/documents/pia_for_it_irs_model.pdf

4.5 One VA Enterprise Architecture

From the perspective of the One-VA EA, at Milestone I PMs are expected to focus on the information relevant to their project in row 2 of the One-VA EA Zachman Framework. This information is described in Chapter 4 of version 2.1 of the One-VA Enterprise Architecture. Chapter 4 defines the functionality of information systems in terms of their target processes, functions and sub functions, data, and their integration points with other information systems both inside and outside the enterprise.

4.6 IT Operations Considerations

Projects that will involve VA's telecommunications and operations infrastructure should consider the following questions leading up to Milestone I:

Network Capacity Planning:

- ▲ What type of transactions types will the project use:
 - Interactive?
 - File transfer?
 - HTTP?
- ▲ What are the project's data network traffic characteristics per transaction type:
 - Traffic volumes and transmission rates?
 - Traffic at peak and non-peak business hours?
- ▲ What is the project's data network load distribution:
 - Basic traffic flow?
 - User count and locations for application execution and end user access?
 - Potential high traffic points?
- ▲ What communications protocols will the project use?
- ▲ What is the project's network availability objective?
- ▲ What is the project's scalability objective?
- ▲ What is the project's interoperability with existing applications?
- ▲ What is the project's required network environment for prototype testing?

4.7 Step 1: Significant Project Management Activities

The following is a summary listing of the significant project management activities and outputs for Step 1.

- ▲ OMB Exhibit 300
- ▲ Project Management Plan (including WBS, Scope Statement, Project Schedule, and Cost Estimates)
- ▲ Scope Management Plan
- ▲ Schedule Management Plan
- ▲ Staffing Management Plan
- ▲ Integrated Change Control Plan
- ▲ Cost Management Plan
- ▲ Communication Plan
- ▲ Procurement Management Plan
- ▲ IT Security Deliverables (See 4.3.)
- ▲ Privacy Impact Assessment
- ▲ Milestone I Briefing and Decision Memo

4.8 Step 1: Responsibility Assignment Matrix

The Responsibility Assignment Matrix below is provided as a “best practices” tool that the PM can adapt and fill out for the appropriate tasks and responsibilities of his or her project. For additional guidance, the PM should refer to the appendices of this guide and consult his or her Administration or Staff Office PMO.

Step 1 – Concept Development							
Deliverable /Artifact	Task	Responsible					
		Business Sponsor	Program Manager	Project Manager	Project Team	Stakeholders / OI&T	VA EIB / SMC
OMB Exhibit 300	Describe how the project supports the President’s Management Agenda.						
	Describe the project performance goals.						
	Describe the program management governance, team, and processes.						
	Conduct and describe an analysis of project alternative solutions.						
	Describe the project life cycle cost formulation.						
	Describe the results of the project risk assessment included mandated OMB risk areas.						
	Describe the project acquisition strategy and accommodation in area such as Section 508.						
	Describe the project performance based management system with emphasis on the Earned Value Measurement System (EVMS).						
	Describe adherence to the VA Enterprise Architecture (EA) and Capital Planning and Investment Control (CPIC) process.						
	Describe the project security and privacy action plan.						
	Approve Exhibit 300						
Project Management Plan	Describe project: description, goals, objectives, strategies, requirements, etc.						
OBS	Develop project Organizational Breakdown Structure (OBS).						
WBS	Develop project Work Breakdown Structure (WBS).						
Schedule	Develop detailed project schedule.						
Cost Estimate	Develop project cost estimate using OBS, WBS, and schedule.						

Step 1 – Concept Development (continued)							
Deliverable /Artifact	Task	Responsible					
		D = Develop or Designate, S = Support, C = Concur, A = Approve					
		Business Sponsor	Program Manager	Project Manager	Project Team	Stakeholders / OI&T	VA EIB / SMC
Scope Management Plan	Describe project: description, goals, objectives, strategies, etc.						
	Describe process used to develop the WBS.						
	Describe the process used to baseline the WBS.						
	Describe the WBS change control process.						
Schedule Management Plan	Describe project: description, goals, objectives, strategies, etc.						
	Describe the use of TeamPlay to develop and manage project schedules.						
	Describe the schedule change management process.						
	Describe how schedules will be used for performance measurement.						
	Describe schedule status reporting.						
Staffing Management Plan	Describe project: description, goals, objectives, strategies, etc.						
	Describe the project organization.						
	Describe the roles and responsibilities for team members and stakeholders						
	Describe project resource requirements by functional areas						
	Describe known resource constraints, such as scarce skills						
	Describe the development and frequency of staffing reports						
Integrated Change Control Plan	Describe project: description, goals, objectives, strategies, etc.						
	Describe the change review and approval process in areas such as scope, schedule, cost, configuration management, technical design and test.						
	Describe the baseline process and change control thresholds such as a work package exceeding budget by 10%.						
	Describe change identification, documentation, implementation and reporting.						

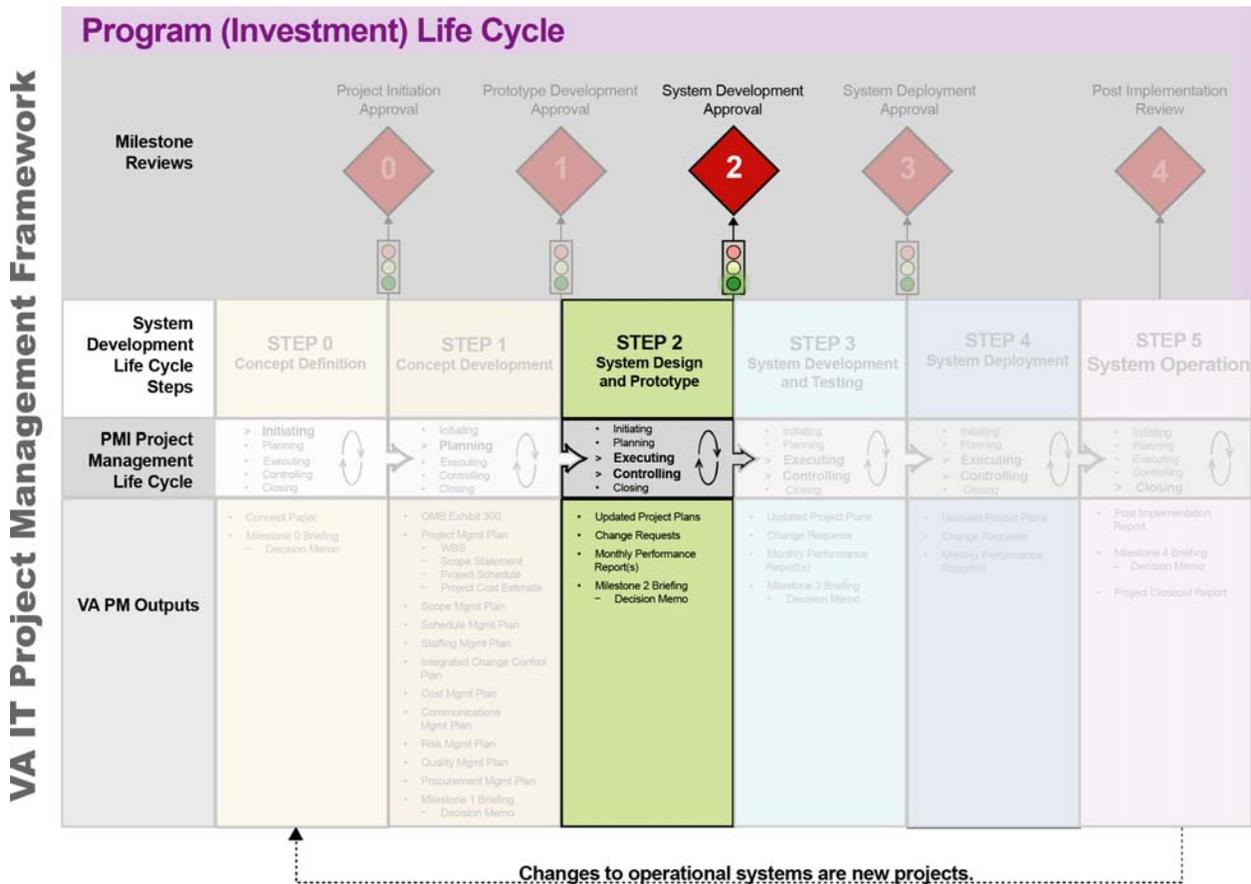
Step 1 – Concept Development (continued)						
Deliverable /Artifact	Task	Responsible				
		D = Develop or Designate, S = Support, C = Concur, A = Approve				
		Business Sponsor	Program Manager	Project Manager	Project Team	Stakeholders / OI&T
Cost Management Plan	Describe project: description, goals, objectives, strategies, etc.					
	Describe the cost estimating process.					
	Describe the development and maintenance of a time-phased budget.					
	Describe the financial cost maintenance to include responsibilities, reporting, and the OMB 300 process.					
	Describe cost performance reporting with emphasis on the OMB 300 process and the Earned Value Management System.					
	Describe cost reporting including the cost performance indexes and variances.					
	Describe the process for managing cost and budget changes.					
Communications Management Plan	Describe project: description, goals, objectives, strategies, etc.					
	Identify the project stakeholders and related information (title, etc.).					
	Describe project reports, development process, and responsible personnel.					
	Describe information accessibility, filing, document security, etc.					

Step 1 – Concept Development (continued)						
Deliverable /Artifact	Task	Responsible				
		D = Develop or Designate, S = Support, C = Concur, A = Approve				
		Business Sponsor	Program Manager	Project Manager	Project Team	Stakeholders / OI&T
Risk Management Plan	Describe project: description, goals, objectives, strategies, etc.					
	Describe risk identification, documentation, and assessment.					
	Describe risk triggers, such as missed delivery dates, etc.					
	Describe the risk analysis process, both qualitative and quantitative.					
	Describe the development of a risk severity grid to aid analysis.					
	Describe risk response planning to minimize the affects of risks.					
	Describe risk documentation and reporting, such as tools like the risk register and risk maintenance software.					
	Describe risk control using a reassessment and validation process.					
Quality Management Plan	Describe project: description, goals, objectives, strategies, etc.					
	Describe the organization quality policy, such as document preparation standards or contracting standards.					
	Describe quality management approach to implementing quality management on the project.					
	Describe the implementation of the quality assurance process.					
	Describe the implementation of the quality control process.					
	Describe the change control process for managing changes to the quality process and standards.					
	Describe project team responsibilities as they relate to quality tasks.					

Step 1 – Concept Development (continued)							
Deliverable /Artifact	Task	Responsible					
		D = Develop or Designate, S = Support, C = Concur, A = Approve					
		Business Sponsor	Program Manager	Project Manager	Project Team	Stakeholders / OI&T	VA EIB / SMC
Procurement Management Plan	Describe project: description, goals, objectives, strategies, etc.						
	Describe the anticipated procurements including preparation lead times and project team responsibilities.						
	Describe how the VA IT Acquisition Process will be employed to approve, initiate, and sustain project procurement efforts.						
	Describe solicitation planning, such as Statement of Work development and the evaluation strategy.						
	Describe the process for contract administration.						
	Describe the process for contract closeout						
Milestone I Briefing	Create briefing slides						
	Seek Administration or Staff Office approval						
	Schedule EIB briefing with OI&T						
	Present briefing to EIB						
Milestone I Decision Memo	Draft Decision Memo						
	Sign Decision Memo						
	Accomplish Decision Memo tasks						

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CHAPTER 5 – SYSTEM DESIGN AND PROTOTYPE



5.1 Step 2: System Design and Prototype

In Step 2, the predominate PMI process groups are Executing and Controlling. (See Appendix B for a detailed discussion of the Executing and Controlling process groups.) At the completion of Step 1 and as a result of the Milestone I briefing, approval is received to proceed forward with Step 2 tasks to design and prototype the system. As an outcome of this approval, planning artifacts are established as baselines and provided to the project team to guide the work effort.

During Step 2 the project manager begins executing the approved project management plan and manages work efforts to design the system. These design activities will result in a validation of the approved and published baseline, as each component is detailed and vetted with the appropriate stakeholders. Typically, there are numerous requests for change during this phase, and the project team utilizes the change control procedures in the scope management plan to assess, decision and implementation change proposals. The project manager is required to report the impact of scope changes in the project Milestone II briefing.

The system design may take the form of a prototype system, proof of concept, a demonstration or, depending on complexity, the first production article. Step 2 tasks lead to the Milestone II

briefing where the results of the initial design effort are reported and the decision is made to continue the project into system development.

5.2 Milestone II: System Development Approval

If the prototype development funding is approved, the system development effort is authorized and begins. During System Definition a prototype is tested and further refinements are made to the various plans and documents based on information learned from the prototype.

Once system development is approved, it will be funded and the systems life-cycle development and testing can begin.

5.3 IT Security

It is critical that security be included in the design stage of a new application or information system. Security can be designed into a new system at a lower cost in the design phase than attempting to “paint it on” later in the life cycle. The security Certification and Accreditation (C&A) process is a formal methodology that examines security risks, threats, and vulnerabilities, as well as sensitivity and criticality of information, to determine what security controls are necessary to mitigate risk to an acceptable level. The process is established in VA Directive 6214 and NIST Special Publication 800-37, and described in Appendix I. During this phase of the project, security documentation should continue to be updated as necessary. The following documents and processes, outlined in VA Dir 6214, should be addressed:

- ▲ Updated System Security Plan (SSP)
- ▲ Security Risk Assessment (RA)
- ▲ Contingency Planning (CP) and Disaster Recovery Plans (DRP)
- ▲ Configuration Management Plan (CMP)
- ▲ Interconnection Security Agreements (ISA) for systems that interconnect to other systems
- ▲ An Interim Authority to Operate (IATO) which may be required if the prototype or test system will attach to a production network or use live test data during its development
- ▲ Security Controls Assessment (SCA, a.k.a., Security Test and Evaluation, or ST&E)

5.4 One VA Enterprise Architecture

At Milestone II, to gain approval for full-scale systems development or acquisition, PMs are expected to focus primarily on rows 3 and 4 of the Framework. This is largely addressed in Chapter 5 of version 2.1 of the One-VA Enterprise Architecture. PMs are expected to revalidate the information addressed at Milestones 0, I, and II.

5.5 IT Operations Considerations

Projects that will involve VA’s telecommunications and operations infrastructure should consider the following questions leading up to Milestone II:

Network Capacity Planning:

- ▲ What are the project's performance requirements:
 - Average expected volume of traffic?
 - Expected peak volume of traffic?
 - Average expected network latency?
 - Maximum network latency allowed?
- ▲ What are the project's availability requirements:
 - Classes of service for different types of traffic?
 - Different availability areas?
- ▲ What are the project's scalability requirements:
 - Expected extensions or addition of sites through life cycle?
 - Expected volume of new users?
 - Expected traffic volume change?
- ▲ What existing applications will be phased out by this project?
- ▲ Has the project provided software and scripts to model the application(s)?
- ▲ What are the special network management features required by the project:
 - Can the project be supported with existing tools?
 - Is training required to support this project?
 - Is new staff required to support this project?

5.6 Step 2: Significant Project Management Activities

The following is a summary listing of the significant project management activities and outputs for Step 2.

- ▲ Updated Project Plans
- ▲ Updated system security documentation
- ▲ Change Requests
- ▲ Monthly Performance Reports
- ▲ Milestone II Briefing and Decision Memo

5.7 Step 2: Responsibility Assignment Matrix

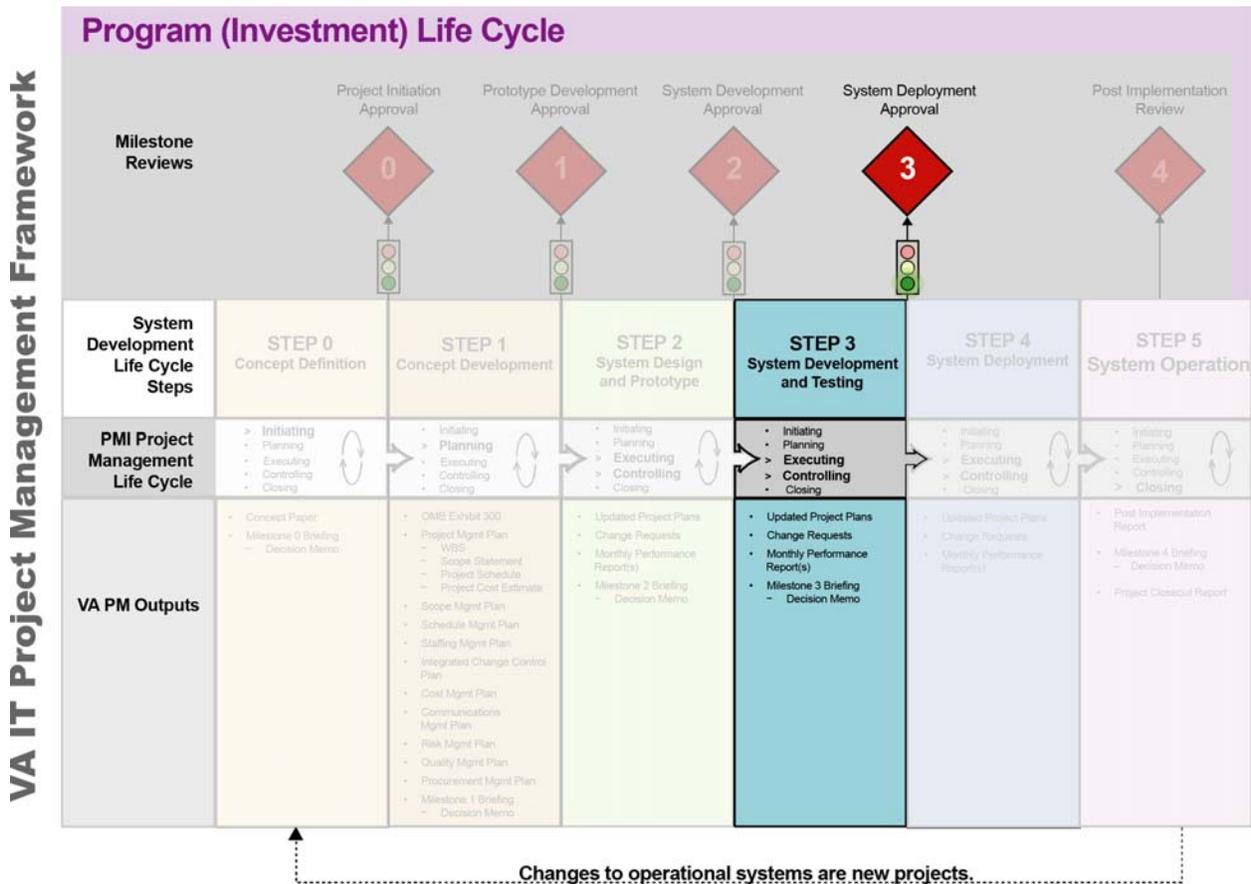
The Responsibility Assignment Matrix below is provided as a “best practices” tool that the PM can adapt and fill out for the appropriate tasks and responsibilities of his or her project. For additional guidance, the PM should refer to the appendices of this guide and consult his or her Administration or Staff Office PMO.

Step 2 – System Design and Prototype							
Deliverable /Artifact	Task	Responsible					
		D = Develop or Designate, S = Support, C = Concur, A = Approve					
		Business Sponsor	Program Manager	Project Manager	Project Team	Stakeholders / OI&T	VA EIB / SMC
Updated Project Plan	Develop and implement a process to insure the project management plan and the subsidiary plans are continuously updated and kept current.						
Change Control	Review the change control process and requests to insure that project changes in scope, schedule, cost, quality, and risk are being captured, assessed, reported, and approved.						
Monthly Performance Reports	Prepare and score template for the VA Office of Information and Technology.						
	Consolidate project data for presentation to SMC						
	Act on decisions and direction received as a result of the monthly performance review.						

Step 2 – System Design and Prototype (continued)							
Deliverable /Artifact	Task	Responsible					
		D = Develop or Designate, S = Support, C = Concur, A = Approve					
		Business Sponsor	Program Manager	Project Manager	Project Team	Stakeholders / OI&T	VA EIB / SMC
Milestone II Briefing	Create briefing slides						
	Seek Administration or Staff Office approval						
	Schedule EIB briefing with OI&T						
	Present briefing to EIB						
Milestone II Decision Memo	Draft Decision Memo						
	Sign Decision Memo						
	Accomplish Decision Memo tasks						

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CHAPTER 6 – SYSTEM DEVELOPMENT AND TESTING



6.1 Step 3: System Development and Testing

In Step 3, the predominate PMI process groups are Executing and Controlling. (See Appendix B for a detailed discussion of the Executing and Controlling process groups.)Within this step, system development translates the design approach into a stable, interoperable, producible, supportable, and cost effective design and production system; and demonstrates system capabilities through testing. Key issues to be addressed are whether the project has adequately demonstrated through testing that the system meets its functional and performance requirements and whether the system is adequately supported by documentation, training, etc., (i.e., whether the system to be deployed meets effectiveness and suitability requirements). Testing efforts are expanded and compliance with the enterprise architecture, environmental and security requirements are of prime importance. During Step 3 the Project Manager makes sure the execution and control processes are effective and producing the desired results.

Step 3 activities that lead to the Milestone III Briefing relate to the project Executing and Controlling phases of the PMBOK. This section describes the events that take place, roles and responsibilities, and the process relationships within these phases.

6.2 Milestone III: System Deployment Approval

Milestone III is intended to have the Project Manager address a basic set of questions necessary to warrant approval to deploy the system. Key issues to be addressed are whether the project has adequately demonstrated through test that the system meets its functional and performance requirements and whether the system is adequately supported by documentation, training, IT security, etc. Depending on the nature of a specific project, this decision Milestone can also be split into a Milestone IIIa for approval of limited initial deployment, and a Milestone IIIb for full, enterprise-wide deployment.

6.3 Complete System and Technical Design

Accomplishing the project goals in accordance with user requirements, security requirements, statutory requirements, telecommunication requirements, and the VA enterprise architecture is manifested in the system and technical design. Along with schedule and cost performance the results of project design and test efforts will be reported at the Milestone 3 Briefing. Specific areas of interest include reliability, performance, stress and user acceptance testing; and security certification. The briefing will include the project risk profile; cost assessments; and an assessment of change management processes.

6.4 IT Security

In accordance with VA Directive 6214, the Project Manager should submit a security Certification and Accreditation (C&A) package, based on NIST SP 800-37, to the VA Office of Cyber Security (OCIS) for new VA information systems. OCIS provides support to the System Owner and Project Manager for accomplishing the C&A process. The C&A process ensures that system's security controls meet all applicable requirements and are in place and working properly. Security is a significant topic of the Milestone III Briefing. A Full Authority to Operate (FATO) is necessary prior to a system going into production. Please see Appendix I for more information.

6.5 One VA Enterprise Architecture

At Milestone III Project Managers must have completed rows 4 and 5 of the Zachman Framework, thereby validating that they have continued to respect the allocated functional baseline established for the project at Milestone I. Additionally, they should have defined the performance metrics to be collected during in-service operation of the system as the basis for evaluating goal achievement in row 6 of the Zachman Framework. Subsequently, during Milestone IV post implementation reviews, PMs are expected to report on the actual performance of the information systems in these areas.

6.6 IT Operations Considerations

Projects that will involve VA's telecommunications and operations infrastructure should consider the following questions leading up to Milestone III:

Network Capacity Planning:

- ▲ What are the project’s final performance requirements for:
 - Network availability?
 - Network latency?
 - Network packet loss?
 - Network jitter?
 - Network quality of service?
- ▲ What are the project’s network performance metrics to be collected during in-service operation?

6.7 Step 3: Significant Project Management Activities

The following is a summary listing of the significant project management activities and outputs for Step 3.

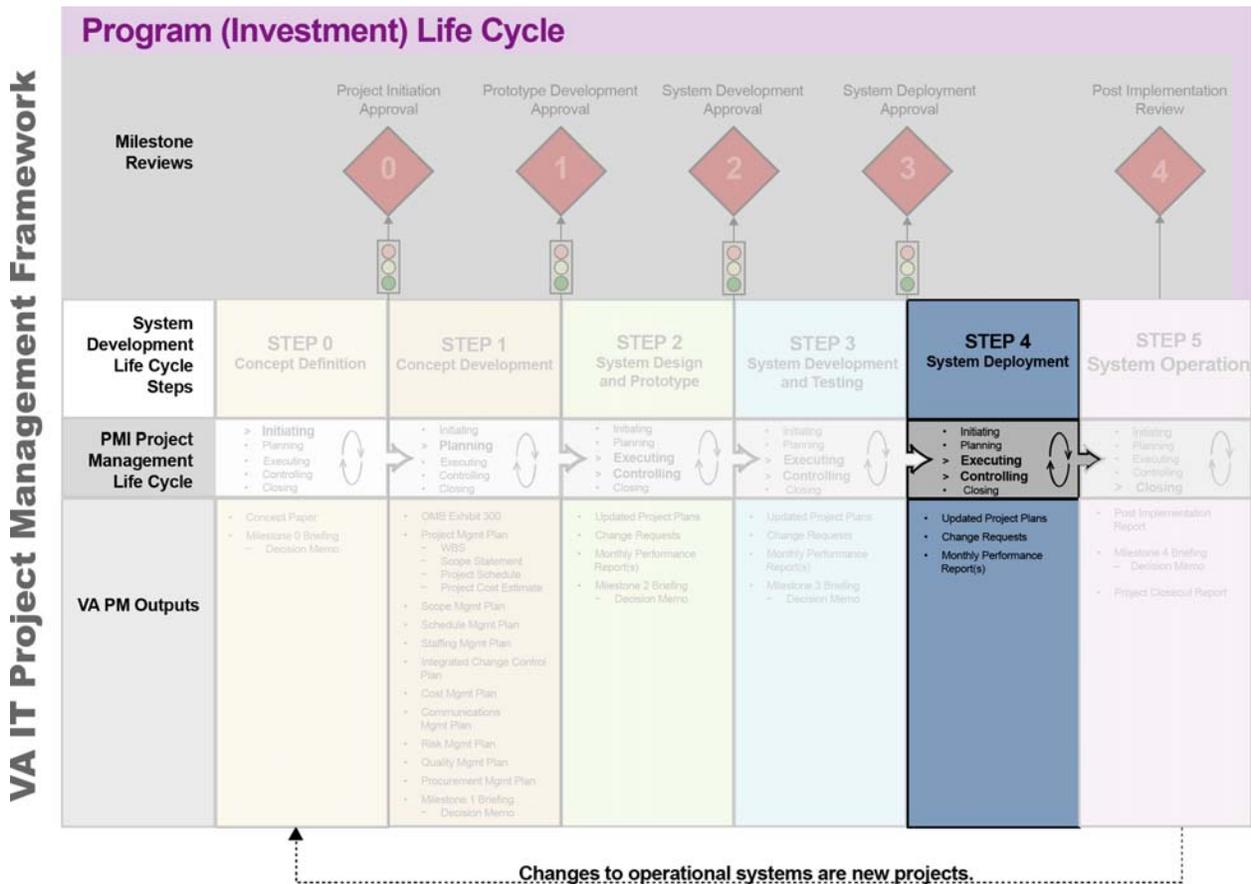
- ▲ Updated Project Plans
- ▲ Change Requests
- ▲ System and Technical Design (as defined by the Office of Enterprise Architecture)
- ▲ Security Certification and Accreditation (See Appendix I)
- ▲ Monthly Performance Reports
- ▲ Milestone 3 Briefing and Decision Memo

6.8 Step 3: Responsibility Assignment Matrix

The Responsibility Assignment Matrix below is provided as a “best practices” tool that the PM can adapt and fill out for the appropriate tasks and responsibilities of his or her project. For additional guidance, the PM should refer to the appendices of this guide and consult his or her Administration or Staff Office PMO.

Step 3 – System Development and Test							
Deliverable /Artifact	Task	Responsible					
		D = Develop or Designate, S = Support, C = Concur, A = Approve					
		Business Sponsor	Program Manager	Project Manager	Project Team	Stakeholders / OI&T	VA EIB / SMC
Updated Project Plan	Insure the project management plan and the subsidiary plans are continuously updated and kept current.						
Change Control	Review the change control process and requests to insure that project changes in scope, schedule, cost, quality, and risk are being captured, assessed, reported, and approved.						
Monthly Performance Reports	Prepare and score template for the VA Office of Information and Technology.						
	Consolidate project data for presentation to SMC						
	Act on decisions and direction received as a result of the monthly performance review.						
Milestone III Briefing	Create briefing slides						
	Seek Administration or Staff Office approval						
	Schedule EIB briefing with OI&T						
	Present briefing to EIB						
Milestone III Decision Memo	Draft Decision Memo						
	Sign Decision Memo						
	Accomplish Decision Memo tasks						

CHAPTER 7 – SYSTEM DEPLOYMENT



7.1 Step 4: System Deployment

In Step 4, the predominant PMI process groups are Executing and Controlling. (See Appendix B for a detailed discussion of the Executing and Controlling process groups.) At this point in the life cycle, the system that has been developed is being deployed. The System Deployment phase of the life cycle is the culmination of the conceptual planning, system design, and assembly efforts.

From the systems viewpoint the deployment tasks include training, hardware installation, system documentation reviews, customer feedback, and system effectiveness/verification reviews. From the project management viewpoint tasks include assessing the deployment schedule/WBS for detail and scope control; understanding deployment risks, cost and resource control (next to project planning, this can be the highest cost step of the project life cycle); insuring quality, communications and feedback management; and finally, collecting lessons learned and initiating closeout activities. Essentially, during the deployment step the project manager uses and updates management processes implemented during the earlier project steps.

7.2 IT Security

Change management practices must track all modifications to the application, including the security concerns. Significant changes require re-evaluation of the operating risks, security deliverables (such as the system security plan), FISMA survey, risk assessment, and security controls assessment. These in turn may trigger a revision to the system’s C&A package. See Appendix I for additional information.

7.3 Step 4: Significant Project Management Activities

The following is a summary listing of the significant project management activities and outputs for Step 4.

- ▲ Updated Project Plans
- ▲ Change Requests
- ▲ Monthly Performance Reports

7.4 Step 4: Responsibility Assignment Matrix

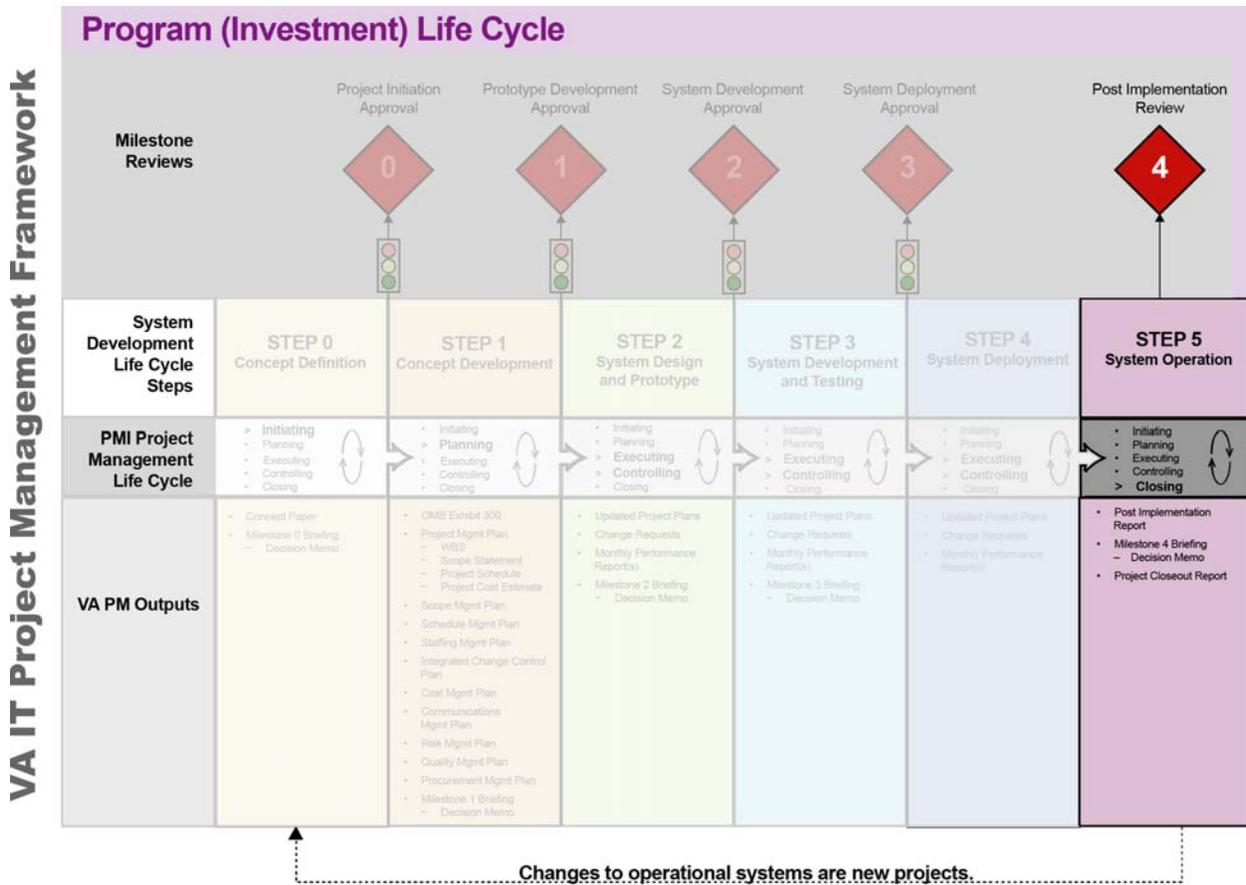
The Responsibility Assignment Matrix below is provided as a “best practices” tool that the PM can adapt and fill out for the appropriate tasks and responsibilities of his or her project. For additional guidance, the PM should refer to the appendices of this guide and consult his or her Administration or Staff Office PMO.

Step 4 – System Deployment							
Deliverable /Artifact	Task	Responsible					
		D = Develop or Designate, S = Support, C = Concur, A = Approve					
		Business Sponsor	Program Manager	Project Manager	Project Team	Stakeholders / OI&T	VA EIB / SMC
Updated Project Plan	Insure the project management plan and the subsidiary plans are continuously updated and kept current.						
Change Control	Review the change control process and requests to insure that project changes in scope, schedule, cost, quality, and risk are being captured, assessed, reported, and approved.						
Monthly Performance	Prepare and score template for the VA Office of Information and Technology.						

Reports	Consolidate project data for presentation to SMC						
	Act on decisions and direction received as a result of the monthly performance review.						

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CHAPTER 8 – SYSTEM OPERATION



8.1 Steps 5: System Operation

In Step 5, the predominate PMI process group is Closing. (See Appendix B for a detailed discussion of the Closing process group.) Generally a project does not include the repetitive and on-going nature of system operations. But it is also clear that many project management processes should carry on through the life cycle of the system. For this reason, especially on large, multi-year, high dollar projects, project offices will continue to operate during the operational phase. Also, these offices manage small projects that are used to implement improvements to the major systems. This process is described as ‘management by projects’ which is a method to apply project management techniques to an on-going process.

It is good to understand that various life cycles and processes call this period of time by different names. The VA IT Integrated Management process calls Step 5 ‘System Operation’ or the operational phase; the milestone review process conducts a ‘Post Implementation Review’. Other terms include the production phase or as with the OMB Exhibit 300 process ‘Steady State’. Processes that remain active during the operational phase are primarily related to the fiscal year funding cycle. They may include performance measurement, life cycle cost formulation, monthly

status reviews, staffing planning, communication planning, and scheduling and scope management. There is also the project closeout report that should be accomplished after the initial deployment regardless of on-going operations. The VA depends on the ‘lessons learned’ to identify training requirements, identify and mitigate risks and improve project management.

8.2 Milestone IV: Post Implementation Review

The Post Implementation Review evaluates the project history and “lessons learned” to identify training requirements and knowledge to be used by future project teams to identify and mitigate risks, refine estimating parameters, and improve project management. Milestone IV, Post Implementation Review, is intended to assess the in-service effectiveness and suitability of an IT system as a continuation of the effectiveness and suitability assessment undertaken in Milestone III. This includes assessment of the success in meeting the fielding plans, meeting performance metrics, cost, schedule, security and projected return on investment. It also includes an assessment of the adequacy of training, documentation and maintenance support for the IT system, as well as whether any changes are required to the IT system. The Milestone IV briefing needs to be scheduled after the system has been in operation long enough to provide a good basis for analysis, usually 6 to 18 months after becoming operational. After the initial Milestone IV review, subsequent Milestone IV reviews are conducted every three years. OI&T is also scheduling Milestone IV reviews for legacy systems as a means of evaluating their current status.

8.3 IT Security

An Authority to Operate (ATO) granted under VA’s C&A program is valid for no more than three years, or when significant changes cause an unacceptable increase in operating risk to the system, whichever comes first, thus triggering the C&A cycle. Additional information can be found in VA Directive 6214 and Appendix I. Moreover, the FISMA process requires that a self-assessment be conducted annually, that any identified security weaknesses are tracked and remediated, and that risk is continually monitored and managed in order to identify and mitigate security risks to an acceptable level. Disposal measures are required if an application is shut down. Please see Appendix I for more information.

8.4 One VA Enterprise Architecture

From a One-VA EA perspective, the PIR provides important feedback to assess not only whether the system continues to be in compliance with the One-VA EA, but also whether in-service experience of the system indicated a need for change in the EA itself. To accomplish this at Milestone 4, PMs must have completed row 6.

8.5 IT Operations Considerations

Projects that will involve VA’s telecommunications and operations infrastructure should consider the following questions leading up to Milestone IV:

Network Capacity Planning:

- ▲ Are the entire project’s final network performance requirements fully met?

- ▲ Are the project's network scalability requirements scheduled?

8.6 Step 5: Significant Project Management Activities

The following is a summary listing of the significant project management activities and outputs for Step 5.

- ▲ Post Implementation Report
- ▲ Milestone IV Briefing and Decision Memo
- ▲ Closeout Report
- ▲ Monthly Performance Reports

8.7 Step 5: Responsibility Assignment Matrix

The Responsibility Assignment Matrix below is provided as a “best practices” tool that the PM can adapt and fill out for the appropriate tasks and responsibilities of his or her project. For additional guidance, the PM should refer to the appendices of this guide and consult his or her Administration or Staff Office PMO.

Step 5 – System Operation							
Deliverable /Artifact	Task	Responsible					
		D = Develop or Designate, S = Support, C = Concur, A = Approve					
		Business Sponsor	Program Manager	Project Manager	Project Team	Stakeholders / OI&T	VA EIB / SMC
Closeout Report: Administrative Closure	Prepare a project description including current requirements and concept of operation.						
	Describe how the objectives of the project were met.						
	Describe the archiving of project documentation.						
	Describe the lessons learned from the project.						
	Describe the plans for the Post Implementation Review (PIR)						
	Describe the closeout of all financial activity and records.						
	Describe the results of the final performance analysis						
Closeout Report: Contract Closure	Describe any open contract issues.						
	Describe the collection and audit of contract documents						
Monthly Performance Reports	Prepare and score template for the VA Office of Information and Technology.						
	Consolidate project data for presentation to SMC						
	Act on decisions and direction received as a result of the monthly performance review.						

Step 5 – System Operation (continued)							
Deliverable /Artifact	Task	Responsible					
		D = Develop or Designate, S = Support, C = Concur, A = Approve					
		Business Sponsor	Program Manager	Project Manager	Project Team	Stakeholders / OI&T	VA EIB / SMC
Milestone IV Briefing / Post Implementation Review	Create briefing slides						
	Seek Administration or Staff Office approval						
	Schedule EIB briefing with OI&T						
	Present briefing to EIB						
Milestone IV Decision Memo	Draft Decision Memo						
	Sign Decision Memo						
	Accomplish Decision Memo tasks						