

# **Section 1 – Introduction**

## **1.0 Background**

Many companies spend thousands of dollars each year on the acquisition, design, development, implementation, and maintenance of information systems vital to mission programs and administrative functions. The need for safe, secure, and reliable system solutions is heightened by the increasing dependence on computer systems and technology to provide services and develop products, administer daily activities, and perform short- and long-term management functions. There is also a need to ensure privacy and security when developing information systems, to establish uniform privacy and protection practices, and to develop acceptable implementation strategies for these practices.

The company needs a systematic and uniform methodology for information systems development. Using this process or Peak Strategy Process© (PSP) will ensure that systems meet IT mission objectives; are easy to maintain and cost-effective to enhance. Sound life cycle management practices include planning and evaluation in each phase of the information system life cycle. The appropriate level of planning and evaluation is commensurate with the cost of the system, the stability and maturity of the technology under consideration, how well defined the user requirements are, the level of stability of program and user requirements and security considerations.

## **1.1 Purpose, Scope and Applicability**

### **1.1.1 Purpose**

This PSP methodology establishes procedures, practices, and guidelines governing the initiation, concept development, planning, requirements analysis, design, development, integration and test, implementation, and operations, maintenance and disposition of information systems (IS) within the company.

### **1.1.2 Scope**

This methodology should be used for all company information systems and applications. It is applicable across all information technology (IT) environments (e.g., mainframe, client, server) and applies to contractually developed as well as in-house developed applications. The specific participants in the life cycle process, and the necessary reviews and approvals, vary from project to project. The guidance provided in this document should be tailored to the individual project based on cost, complexity, and criticality to the agency's mission. See Chapter 13 for Alternate PSP Work Patterns if a formal PSP is not feasible. Similarly, the documents called for in the guidance and shown in Appendix C should be tailored based on the scope of the effort and the needs of the decision authorities.

### 1.1.3 Applicability

This methodology can be applied to all company Departments, Boards, and Divisions who are responsible for information systems development. All Project Managers and development teams involved in system development projects represent the primary audience for this guide.

## 1.2 Introduction to PSP

The PSP includes ten phases during which defined IT work products are created or modified. The tenth phase occurs when the system is disposed of and the task performed is either eliminated or transferred to other systems. The tasks and work products for each phase are described in subsequent chapters. Not every project will require that the phases be sequentially executed. However, the phases are interdependent. Depending upon the size and complexity of the project, phases may be combined or may overlap. The major phases are Prepare, Evaluate, Act and Kaizen. Kaizen is Japanese for continuous and incremental improvement. We believe that processes should consistently be reviewed and improved. See Figure 1-1 below:



The company's PSP encompasses ten phases:

### **1.2.1 Initiation Phase**

The initiation of a system (or project) begins when a business need or opportunity is identified. A Project Manager should be appointed to manage the project. This business need is documented in a Concept Proposal. After the Concept Proposal is approved, the System Concept Development Phase begins.

### **1.2.2 System Concept Development Phase**

Once a business need is approved, the approaches for accomplishing the concept are reviewed for feasibility and appropriateness. The System Concept Development Document identifies the scope of the system and requires Senior Official approval and funding before beginning the Planning Phase.

### **1.2.3 Planning Phase**

The concept is further developed to describe how the business will operate once the approved system is implemented, and to assess how the system will impact employee and customer privacy. To ensure the products and /or services provide the required capability on-time and within budget, project resources, activities, schedules, tools, and reviews are defined. Additionally, security certification and accreditation activities begin with the identification of system security requirements and the completion of a high level vulnerability assessment.

### **1.2.4 Requirements Analysis Phase**

Functional user requirements are formally defined and delineate the requirements in terms of data, system performance, security, and maintainability requirements for the system. All requirements are defined to a level of detail sufficient for systems design to proceed. All requirements need to be measurable and testable and relate to the business need or opportunity identified in the Initiation Phase.

### **1.2.5 Design Phase**

The physical characteristics of the system are designed during this phase. The operating environment is established, major subsystems and their inputs and outputs are defined, and processes are allocated to resources. Everything requiring user input or approval must be documented and reviewed by the user. The physical characteristics of the system are specified and a detailed design is prepared. Subsystems identified during design are used to create a detailed structure of the system. Each subsystem is partitioned into one or more design units or modules. Detailed logic specifications are prepared for each software module.

### **1.2.6 Development Phase**

The detailed specifications produced during the design phase are translated into hardware, communications, and executable software. Software shall be unit tested, integrated, and retested in a systematic manner. Hardware is assembled and tested.

### **1.2.7 Integration and Test Phase**

The various components of the system are integrated and systematically tested. The user tests the system to ensure that the functional requirements, as defined in the functional requirements document, are satisfied by the developed or modified system. Prior to installing and operating the system in a production environment, the system must undergo certification and accreditation activities.

### **1.2.8 Implementation Phase**

The system or system modifications are installed and made operational in a production environment. The phase is initiated after the system has been tested and accepted by the user. This phase continues until the system is operating in production in accordance with the defined user requirements.

### **1.2.9 Operations and Maintenance Phase**

The system operation is ongoing. The system is monitored for continued performance in accordance with user requirements, and needed system modifications are incorporated. The operational system is periodically assessed through In-Process Reviews to determine how the system can be made more efficient and effective. Operations continue as long as the system can be effectively adapted to respond to the company's needs. When modifications or changes are identified as necessary, the system may reenter the planning phase.

### **1.2.10 Disposition Phase**

The disposition activities ensure the orderly termination of the system and preserve the vital information about the system so that some or all of the information may be reactivated in the future if necessary. Particular emphasis is given to proper preservation of the data processed by the system, so that the data is effectively migrated to another system or archived in accordance with applicable records management regulations and policies, for potential future access.

## **1.3 Control**

This PSP calls for a series of comprehensive management controls. These include:

- Peak Strategy Process should be used to ensure a structured approach to information systems development and operation.
- Each system project must have an accountable sponsor.
- A single project manager must be appointed for each system project.
- A comprehensive project management plan is required for each system project.
- Data Management and security must be emphasized throughout the PSP.
- A system project may not proceed until resource availability is assured.

# **Section 2 – Strategic Planning**

## **2.0 Strategic Planning**

Strategic planning provides a framework for analyzing where the company is and where the company should be in the future. The strategic plan identifies goals, objectives and strategies in support of the company's mission and vision. The company's strategic plans are linked to the overall goals and direction the executive committee has set and determines what information systems projects get started and/or continue to receive funding.

## **2.1 Enterprise Architecture**

The development of information technology architectures promotes the effective management and operation of IT investments and services. This enterprise architecture (EA) provides a comprehensive, integrated picture of current capabilities and relationships (i.e., the current architecture), an agreed upon blueprint for the future (i.e., the target architecture), and a strategy for transitioning from the current to the target environment. The EA describes the information needed to carry out these business functions and processes; identifies the system applications that create or manipulate data to meet business information needs; and documents the underlying technologies (i.e., hardware, software, communications networks, and devices) that enable the generation and flow of information.

The EA is an essential tool for taking a strategic approach to planning and managing IT resources and making maximum use of limited IT dollars. It ensures the alignment of IT with the Department's strategic goals so that business needs drive technology rather than the reverse; identifies redundancies, and thus potential cost savings; highlights opportunities for streamlining business processes and information flows; assists in optimizing the interdependencies and interrelationships among the programs and services of the company's various departments as well as with external vendors; ensures a logical and integrated approach to adopting new technologies; promotes adherence to department-wide standards including those for systems security; and pinpoints and resolve issues of data availability, utility, quality and access.

## **2.2 Performance Measures**

Performance measurement is an essential element in developing effective systems through a strategic management process. The mission, goals, and objectives of the company are identified in its strategic plan. Strategies are developed to identify how the company can achieve the goals. For each goal, the company establishes a set of performance measures. These measures enable the company to assess how effective each of its projects are in improving the company's operations.

For the company to make this assessment, the current performance level for each measure (performance level baseline) for the existing systems must be determined. For each project

plan, as part of the cost benefit analysis, estimate the performance levels expected to be attained as a result of the planned improvements. As the project's improvements are implemented, actual results are compared with the estimated gains to determine the success of the effort. Further analysis of the results may suggest additional improvement opportunities.

Performance Measurement, along with evaluation are the principle methods for determining if identified benefits are realized in the expected time frame.

## **2.3 Business Process Reengineering**

The primary underpinning of any new system development or initiative should be business process reengineering. Business process reengineering (BPR) involves a change in the way a company conducts its business. BPR is the redesign of the company, culture, and business processes using technology as an enabler to achieve quantum improvements in cost, time, service, and quality. Information technology is not the driver of BPR. Rather, it is the company's desire to improve its processes and how the use of technology can enable some of the improvements. BPR may not necessarily involve the use of technology. There are circumstances when all BPR will entail is an elimination of steps or the process. When BPR is applied to one or more related business processes, a company can improve its products and services and reduce resource requirements. The results of a successful BPR program are increased productivity and quality improvements. BPR is not just about continuous, incremental and evolutionary productivity-enhancements. It also utilizes an approach which suggests scrapping a dysfunctional process and starting from scratch to obtain larger benefits.

# **Section 3 – Initiation Phase**

## **3.0 Objective**

The Initiation Phase begins when management determines that it is necessary to enhance a business process through the application of information technology. The purposes of the Initiation Phase are to:

- Identify and validate an opportunity to improve business accomplishments of the company or a deficiency related to a business need,
- Identify significant assumptions and constraints on solutions to that need, and
- Recommend the exploration of alternative concepts and methods to satisfy the need.

IT projects may be initiated as a result of business process improvement activities, changes in business functions, advances in information technology, or may arise from external sources, such as public law, the general public or state/local agencies. The Project Sponsor articulates this need within the company to initiate the project life cycle. During this phase, a

Project Manager is appointed who prepares a Statement of Need or Concept Proposal. When an opportunity to improve business/mission accomplishments or to address a deficiency is identified, the Project Manager documents these

## **3.1 Tasks and Activities**

The following activities are performed as part of the Initiation Phase. The results of these activities are captured in the Concept Proposal.

### ***3.1.1 Identify the Opportunity to Improve Business Functions***

Identify why a business process is necessary and what business benefits can be expected by implementing this improvement. A business scenario and context must be established in which a business problem is clearly expressed in purely business terms. Provide background information at a level of detail sufficient to familiarize senior managers to the history, issues and customer service opportunities that can be realized through improvements to business processes with the potential support of IT. This background information must not offer or predetermine any specific automated solution, tool, or product.

### ***3.1.2 Identify a Project Sponsor***

The Project Sponsor is the principle authority on matters regarding the expression of business needs, the interpretation of functional requirements language, and the mediation of issues regarding the priority, scope and domain of business requirement.

### ***3.1.3 Form (or appoint) a Project Manager***

This activity involves the appointment of a project manager who carries both the responsibility and accountability for project execution. For small efforts, this may only involve assigning a project to a manager within an existing department that already has an inherent support structure. For new, major projects, new resources may be formed - requiring the hiring and reassignment of many technical and business specialists.

Each project shall have an individual designated to lead the effort. The individual selected will have appropriate skills, experience, credibility, and availability to lead the project. Clearly defined authority and responsibility must be provided to the Project Manager.

The Project Manager will work with Stakeholders to identify the scope of the proposed program, participation of the key executives, and individuals who can participate in the formal reviews of the project. This decision addresses both programmatic and information management-oriented participation as well as technical interests in the project that maybe knows at this time.

In view of the nature and scope of the proposed program, the key individuals and oversight committee members who will become the approval authorities for the project will be identified.

### **3.1.4 Document the Phase Efforts**

The results of the phase efforts are documented in the Concept Proposal.

### **3.1.5 Review and Approval to Proceed**

The approval of the Concept Proposal identifies the end of the Initiation Phase. Approval should be annotated on the Concept Proposal by the Program Sponsor and the Chief Information Officer (CIO).

## **3.2 Roles and Responsibilities**

- Sponsor. The Sponsor is the senior spokesperson for the project, and is responsible for ensuring that the needs and accomplishments within the business area are widely known and understood. The Sponsor is also responsible for ensuring that adequate resources to address their business area needs are made available in a timely manner.
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- Project Manager. The appointed project manager is charged with leading the efforts to ensure that all business aspects of the process improvement effort are identified in the Concept Proposal. This includes establishing detailed project plans and schedules.
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## **3.3 Deliverables**

The following deliverable shall be initiated during the Initiation Phase:

### **3.3.1 Concept Proposal**

This is the need or opportunity to improve business functions. It identifies where strategic goals are not being met or mission performance needs to be improved. Appendix B-1 provides a template for the Concept Proposal.

## **3.4 Issues for Consideration**

In this phase, it is important to state the needs or opportunities in business terms. Avoid identifying a specific product or vendor as the solution. The Concept Proposal should not be more than 2-5 pages in length.

## **3.5 Phase Review Activity**

At the end of this phase, the Concept Proposal is approved before proceeding to the next phase. The Concept Proposal should convey that this project is a good investment and identify any potential impact on the infrastructure/architecture.



# Section 4 –Concept Development Phase

## 4.0 Objective

System Concept Development begins when the Concept Proposal has been formally approved and requires study and analysis that may lead to system development activities. The review and approval of the Concept Proposal begins the formal studies and analysis of the need in the System Concept Development Phase and begins the life cycle of an identifiable project.

## 4.1 Tasks and Activities

The following activities are performed as part of the Concept Development Phase. The results of these activities are captured in the documents in this phase.

### ***4.1.1 Study and Analyze the Business Need***

The project team, supplemented by enterprise architecture or other technical experts, if needed, should analyze all feasible technical, business process, and commercial alternatives to meeting the business need. These alternatives should then be analyzed from a cost perspective. The results of these studies should show a range of feasible alternatives based on cost, technical capability, and scheduled availability. Typically, these studies should narrow the system technical approaches to only a few potential, desirable solutions that should proceed into the subsequent PSP phases.

### ***4.1.2 Plan the Project***

The project team should develop high-level (baseline) schedule, cost, and performance measures which are summarized in the Concept Development Document (CDD). These high-level estimates are further refined in subsequent phases.

### ***4.1.3 Form the Project Acquisition Strategy***

The acquisition strategy should be included in the CDD. The project team should determine the strategies to be used during the remainder of the project. Will the work be accomplished with available staff or do contractors need to be hired? Discuss available and projected technologies, such as reuse or Commercial Off-the-Shelf and potential contract types.

### ***4.1.4 Study and Analyze the Risks***

Identify any programmatic or technical risks. The risks associated with further development should also be studied. The results of these assessments should be summarized in the CDD.

#### **4.1.5 Obtain Project Funding, Staff and Resources**

Estimate, justify, submit requests for, and obtain resources to execute the project

#### **4.1.6 Document the Phase Efforts**

The results of the phase efforts are documented in the CDD.

#### **4.1.7 Review and Approval to Proceed**

The results of the phase efforts are presented to project stakeholders and decision makers together with a recommendation to (1) proceed into the next PSP phase, (2) continue additional conceptual phase activities, or (3) terminate the project. The emphasis of the review should be on (1) the successful accomplishment of the phase objectives, (2) the plans for the next PSP phase, and (3) the risks associated with moving into the next PSP phase. The review also addresses the availability of resources to execute the subsequent PSP phases. The results of the review should be documented reflecting the decision on the recommended action.

### **4.2 Roles & Responsibilities**

- Sponsor. The sponsor should provide direction and sufficient study resources to commence the System Concept Development Phase.
- Project Manager. The appointed project manager is charged with leading the efforts to accomplish the Concept Development Phase tasks discussed above. The Project Manager is also responsible for reviewing the deliverables for accuracy, approving deliverables and providing status reports to management.
- Chief Information Officer (CIO) and Executive Review Board (ERB). The CIO/ERB approve the CDD. Approval allows the project to enter the Planning Phase.

### **4.3 Deliverables**

The following deliverable shall be initiated during the System Concept Development Phase:

#### **4.3.1 Concept Development Document (CDD)**

Identifies the scope of a system (or capability). It should contain the high level requirements, benefits, business assumptions, and program costs and schedules. Appendix B-2 provides a template for the Concept Development Document.

### **4.4 Phase Review Activity**

The CDD Review shall be performed at the end of this phase. The review ensures that the goals and objectives of the system are identified and that the feasibility of the system is established. This review is organized, planned, and led by the Program Manager and/or representative.

# Section 5 – Planning Phase

## 5.0 Objective

Many of the plans essential to the success of the entire project are created in this phase; the created plans are then reviewed and updated throughout the remaining PSP phases. In the Planning Phase, the concept is further developed to describe how the business will operate once the approved system is implemented and to assess how the system will impact employee and customer privacy. To ensure the products and/or services provide the required capability on-time and within budget, project resources, activities, schedules, tools, and reviews are defined. Additionally, security certification and accreditation activities begin with identification of system security requirements and the completion of a high-level vulnerability assessment.

## 5.1 Tasks and Activities

The following tasks are performed as part of the Planning Phase. The results of these activities are captured in various project plans and documents.

### ***5.1.1 Refine System Development & Acquisition Strategies***

Refine the role of system development contractors during the subsequent phases. For example, one strategy option would include active participation of system contractors in the Requirements Analysis Phase. In this case, the Planning Phase must include complete planning, solicitation preparation, and source selection of the participating contractors (awarding the actual contract may be the first activity of the next phase). If contractors will be used to complete the required documents, up-front acquisition planning is essential.

### ***5.1.2 Analyze Project Schedule***

Analyze and refine the project schedule, taking into account risks and resource availability. Develop a detailed schedule for the Requirements Analysis Phase and subsequent phases.

### ***5.1.3 Create Internal Processes***

Create, gather, adapt, and/or adopt the internal management, engineering, business management, and contract management internal processes that will be used by the project office for all subsequent PSP phases. This could result in the establishment of teams or working groups for specific tasks, (e.g., quality assurance, configuration management, change control). Plan, articulate, and gain approval for the resulting processes.

#### **5.1.4 Staff Project Office**

Further staff the project office with needed skills across the broad range of technical and business disciplines. Select Technical Review Board members (if appropriate) and document roles and responsibilities. If needed, solicit and award support contracts to provide needed non-personal services that are not available through agency resources.

#### **5.1.5 Establish Agreements with Stakeholders**

Establish relationships and agreements with internal and external firms that will be involved with the project.

#### **5.1.6 Develop the Project Management Plan Document (PMP)**

Plan, articulate and gain approval of the strategy to execute the management aspects of the project (Project Management Plan). Develop a detailed project work breakdown structure.

#### **5.1.7 Develop the Systems Engineering Management Plan**

Plan, articulate, and gain approval of the strategy to execute the technical management aspects of the project. Develop a detailed system work breakdown structure.

#### **5.1.8 Review Feasibility of System Alternatives**

Review and validate the feasibility of the system alternatives developed during the previous phase.

#### **5.1.9 Study and Analyze Security Implications**

Study and analyze the security implications of the technical alternatives and ensure the alternatives address all aspects or constraints imposed by security requirements.

#### **5.1.10 Plan the Solicitation, Selection and Award**

During this phase or subsequent phases, plan the solicitation, selection and award of contracted efforts.

## **5.2 Roles & Responsibilities**

- Project Manager. The project manager is responsible and accountable for the successful execution of the Planning Phase. The project manager is responsible for leading the team that accomplishes the tasks shown above. The project manager is also responsible for reviewing deliverables for accuracy, approving deliverables, and providing status reports to management.
- Project Team. The project team members (regardless of the company of permanent assignment) are responsible for accomplishing assigned tasks as directed by the project manager.

- Contracting Officer. The contracting officer is responsible and accountable for the procurement activities and signs contract awards.
- Oversight Activities. Oversight committee members provide advice and counsel to the project manager on the conduct and requirements of the planning effort. Additionally, oversight activities provide information, judgments, and recommendations to the company decision makers during project reviews and in support of project decision milestones.
- Chief Information Officer/Executive Review Board. At an appropriate level within the company, an individual should be designated as the project decision authority (may or may not be the same individual designated as the sponsor in the previous phase). This individual should be charged with assessing: (1) the completeness of the planning phase activities, (2) the robustness of the plans for the next PSP phase, (3) the availability of resources to execute the next phase, and (4) the acceptability of the acquisition risk of entering the next phase. For applicable projects, this assessment also includes the readiness to award any major contracting efforts needed to execute the next phase. During the end of phase review process, the decision maker may (1) direct the project to move forward into the next PSP phase (including awarding contracts), (2) direct the project to remain in the Planning Phase pending completion of delayed activities or additional risk reduction efforts, or (3) terminate the project.

## **5.3 Deliverables**

### ***5.3.6 Project Plan Document***

This plan should be prepared for all projects, regardless of size or scope. It documents the project scope, tasks, schedule, allocated resources, and interrelationships with other projects.

The plan provides details on the functional units involved, required job tasks, cost and schedule performance measurement, milestone and review scheduling. Revisions to this Plan occur at the end of each phase and as information becomes available. Appendix B-3 provides a template for the Project Plan Document.

## **5.4 Issues for Consideration**

### ***5.4.1 Audit Trails***

Audit trails, capable of detecting security violations, performance problems and flaws in applications should be specified. Include the ability to track activity from the time of logon, by user ID and location of the equipment, until logoff. Identify any events that are to be maintained regarding the operating system, application and user activity.

### **5.4.2 Access Based on “Need to Know”**

Prior to an individual being granted access to the system, the program manager’s office should determine each individual’s “Need to Know” and should permit access to only those areas necessary to allow the individual to adequately perform her/her job.

## **5.5 Phase Review Activity**

Upon completion of all Planning Phase tasks and receipt of resources for the next phase, the Project Manager, together with the project team should prepare and present a project status review for the decision maker and project stakeholders. The review should address: (1) Planning Phase activities status, (2) planning status for all subsequent PSP phases (with significant detail on the next phase, to include the status of pending contract actions), (3) and resource availability status.

# **Section 6 – Requirements Analysis Phase**

## **6.0 Objective**

The Requirements Analysis Phase will begin when the previous phase documentation has been approved or by management direction. Documentation related to user requirements from the Planning Phase shall be used as the basis for further user needs analysis and the development of detailed user requirements. The analysis may reveal new insights into the overall information systems requirements, and, in such instances, all deliverables should be revised to reflect this analysis.

During the Requirements Analysis Phase, the system shall be defined in more detail with regard to system inputs, processes, outputs, and interfaces. This definition process occurs at the functional level. The system shall be described in terms of the functions to be performed, not in terms of computer programs, files, and data streams. The emphasis in this phase is on determining what functions must be performed rather than how to perform those functions.

## **6.1 Tasks and Activities**

The following tasks are performed during the Requirements Analysis Phase. The tasks and activities actually performed depend on the nature of the project. Guidelines for selection and inclusion of tasks for the Requirements Analysis Phase may be found in Chapter 13.

### **6.1.1 Analyze and Document Requirements.**

First consolidate and affirm the business needs. Analyze the intended use of the system and specify the functional and data requirements. Connect the functional requirements to the data requirements. Define functional and system requirements that are not easily expressed in data and process models. Refine the high level architecture and logical design to support the system and functional requirements

A logical model is constructed that describes the fundamental processes and data needed to support the desired business functionality. This logical model will show how processes interact and how processes create and use data.

Include all possible requirements including those for:

- functional and capability specifications, including performance, physical characteristics, and environmental conditions under which the software item is to perform;
- interfaces external to the software item;
- qualification requirements
- safety specifications, including those related to methods of operation and maintenance, environmental influences, and personnel injury;
- security specifications, including those related to compromise of sensitive information
- human-factors engineering (ergonomics), including those related to manual operations, human-equipment interactions, constraints on personnel, and areas needed concentrated human attention, that are sensitive to human errors and training
- data definition and database requirements;
- installation and acceptance requirements of the delivered software product at the operation and maintenance site(s)
- user documentation
- user operation and execution requirements
- user maintenance requirements

### **6.1.2 Develop Test Criteria and Plans**

Establish the test criteria and begin test planning. Include all areas where testing will take place and who is responsible for the testing. Identify the testing environment, what tests will be performed, test procedures; and traceability back to the requirements.

### **6.1.3 Develop an Interface Control Document**

The project team responsible for the development of this system needs to articulate the other systems (if any) this system will interface with. Identify any interfaces and the exchange of data or functionality that occurs. All areas that connect need to be documented for security as well as information flow purposes.

### **6.1.4 Conduct Functional Review**

The Functional and Data Requirements Review is conducted in the Requirements Analysis Phase by the technical review board. This is where the functional

requirements are reviewed to see if they are sufficiently detailed and are testable. It also provides the Project Manager with the opportunity to ensure a complete understanding of the requirements and that the documented requirements.

### **6.1.5 *Revise Previous Documentation***

Review and update previous phase documentation if necessary before moving to the next phase.

## **6.2 Roles & Responsibilities**

- Project Manager. The project manager is responsible and accountable for the successful execution of the Requirements Analysis Phase. The project manager is responsible for leading the team that accomplishes the tasks shown above. The Project Manager is also responsible for reviewing deliverables for accuracy, approving deliverables and providing status reports to managers.
- Technical Review Board. Formally established board that examines the functional requirements for accuracy, completeness, clarity, attainability, and traceability to the high-level requirements identified in the Concept of Operations.
- Project Team. The project team members (regardless of the company of permanent assignment) are responsible for accomplishing assigned tasks as directed by the project manager.
- Contracting Officer. The contracting officer is responsible and accountable for the procurement activities and signs contract awards.
- CIO. Company oversight activities, including the Executive Review Board office, provide advice and counsel to the project manager on the conduct and requirements of the Requirements Analysis Phase effort. Additionally, oversight activities provide information, judgements, and recommendations to the agency decision makers during project reviews and in support of project decision milestones.

## **6.3 Deliverables**

### **6.3.1 *Functional Requirements Document***

Serves as the foundation for system design and development; captures user requirements to be implemented in a new or enhanced system; the systems subject matter experts. This is a complete, user oriented functional and data requirements for the system which must be defined, analyzed, and documented to ensure that user and system requirements have been collected and documented.

All requirements must include considerations for capacity and growth. The requirements document should include but is not limited to records and privacy act, electronic record management, record disposition schedule, and components' unique requirements. Appendix B-4 provides a template for the Function Requirements Document.



### ***6.3.2 Test and Evaluation Master Plan***

Ensures that all aspects of the system are adequately tested and can be implemented; documents the scope, content, methodology, sequence, management of, and responsibilities for test activities. Unit, integration, and independence acceptance testing activities are performed during the development phase. Unit and integration tests are performed under the direction of the project manager. Independence acceptance testing is performed independently from the developing team and is coordinated with the Quality Assurance (QA) department. Acceptance tests will be performed in a test environment that duplicates the production environment as much as possible. They will ensure that the requirements are defined in a manner that is verifiable. They will support the traceability of the requirements from the source documentation to the design documentation to the test documentation. They will also verify the proper implementation of the functional requirements. Appendix B-5 provides a template for the Test and Evaluation Master Plan.

## **6.4 Issues for Consideration**

In the Requirements Analysis Phase, it is important to get everyone involved with the project to discuss and document their requirements. A baseline is important in order to begin the next phase.

## **6.5 Phase Review Activity**

Upon completion of all Requirements Analysis Phase tasks and receipt of resources for the next phase, the Project Manager, together with the project team should prepare and present a project status review for the decision maker and project stakeholders. The review should address: (1) Requirements Analysis Phase activities status, (2) planning status for all subsequent life cycle phases (with significant detail on the next phase, to include the status of pending contract actions), (3) resource availability status, and (4) acquisition risk assessments of subsequent life cycle phases given the planned acquisition strategy.