Virginia Commonwealth University

Project Management Standard

Scope: This standard is applicable to all IT projects implemented by VCU faculty, staff, students, contractors, business partners, and IT service providers.

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Virginia Commonwealth University

IT Project Management Standard

VCU is committed to continuously improving the delivery of information technology (IT) solutions within budget, on schedule, within scope and in a way that maximizes their contribution to the University's strategic mission. To this end, the University has established a standardized IT project management methodology based on proven best practices promoted by the Project Management Institute (PMI) to assist IT project leaders in planning and managing their projects. This standard and associated guidelines were developed in full accordance with and in support of the VCU Information Technology Project Management Policy and will be maintained by the VCU Project Management Office (PMO). The PMO will monitor the future development of project and portfolio management best practices and incorporate into VCU’s methodology those that are proven to improve project performance in a higher education setting.

Project Definition

The definition of a project covered by this standard is a temporary information technology process with an established beginning and end time that has a set of defined tasks and assigned resources, undertaken to deliver a unique product, service or result.

Overview

Project management activities begin at the Initiation Phase where a project has been approved by management with funding identified. It continues on through the remaining life cycle phases of Planning, Execution and Control, and Closeout. This PM standard addresses the governance and management of any IT activity that meets the definition of a project.

Project Categories

VCU IT projects are categorized by budget, resources, time and risk as: (1) Fast Track, (2) Low Complexity, (3) Medium Complexity, and (4) High Complexity. Any activity that is determined by management to be undertaken as a project in one of these categories is covered by the Project Management Standard. The amount of oversight and documentation required is directly related to and increases with project complexity. High complexity projects are typically high risk and/or high dollar value projects, requiring extensive integration and stringent control processes. The nature of high complexity projects drives the requirement for extensive planning, documentation, and strictly enforced change and configuration management processes. Although Medium complexity projects require thorough planning, typically less documentation and control processes are needed to deliver the project product or service as specified in the project.
scope. Low complexity projects also require complete planning but less documentation and fewer control processes are needed to deliver the project product or service as specified in the project scope. Fast Track projects require only basic documentation with minimal control and tracking information.

The operational controls, documentation, and tracking required for IT Projects of High, Medium, Low, or Fast Track Complexity are identified and available on the PMO Web site.

**IT Project Management Structure**

**Information Technology Governance Board**

The University’s Information Technology Governance Board (ITGB) is charged with reviewing and prioritizing High Complexity Projects, including project development and associated contracts. The ITGB also advises on the termination of High Complexity Projects, and provides guidance on ensuring the maximum Return On Investment (ROI) for all projects is obtained from the University’s portfolio.

**CIO**

The CIO serves as the chief administrative officer of Technology Services. Other responsibilities of the CIO include developing policies, standards and procedures for technology and project management, granting funding approval for all TS-sourced projects, approving IT procurements, and approving Invitations for Bids, Requests for Proposals, and contracts. The CIO may also direct the modification or suspension of any IT Project that has not met the performance measures agreed to by the CIO and the Project Sponsor if such action is appropriate and consistent with the terms of any affected contracts. A decision regarding suspension of a High Complexity Project will be made in consultation with the ITGB and Board of Visitors.

**Project Management Office (PMO)**

The roles and responsibilities of the PMO are established in the PMO Charter. On behalf of the CIO, the PMO implements an integrated approach to the management of information technology investments. The PMO consults with University departments and business units and assists them with the analysis and documentation of project proposals. The PMO serves as coordinator between project sponsors and the University IT Governance structure by reviewing project documentation and preparing recommendations for the CIO and the ITGB as appropriate. Other duties of the PMO include facilitating project submission, selection, and prioritization, creating and managing a central repository for project information and analysis, maintain the standard set of project management best practices, provide effective communications to project stakeholders, make available the education and training required for project managers, and supply the services necessary to insure Commonwealth requirements for project management and auditing are met.
**Project Sponsor**
The Project Sponsor is the individual, usually part of the University’s management team, who makes the business case for the project. This individual usually has the authority and responsibility to define project goals, secure resources, establish project priorities, and resolve intra- and inter-organizational issues and conflicts. In addition, the Project Sponsor and Project Manager work closely to ensure that project objectives are met, resources such as functional subject matter experts are made available to the project and issues are resolved as expeditiously as possible. Project Sponsors should be prepared to dedicate a portion of their time on a weekly, if not daily basis, to attend to project details.

**Project Manager**
Every IT Project must have a designated Project Manager. The Project Manager is responsible for the management of the project from planning through closeout. Project Sponsors will advise on the qualifications of Project Managers for their projects and Project Managers will be assigned by University management and/or the CIO. The qualifications required to manage projects escalate with the project’s complexity. Only experienced and appropriately trained project managers will be assigned High Complexity Projects. All Project Managers are responsible for entering the information for their projects in a repository such as the Project Management Information and Tracking system, and updating that information as required by their project’s classification. They must also regularly report project status in accordance with the published schedule for their project’s complexity level.

**Strategic Planning**
The Office of Technology Services (OTS) will develop and maintain an IT Strategic Plan with the primary goal of supporting and adding value to the University’s overall strategic plan. The IT Strategic Plan will establish a broad direction with specific goals for managing information technology and supporting delivery of IT services to VCU’s customers. IT projects and assets will be viewed as long-term investments that form the foundation for selecting, controlling, and evaluating technology investments as part of a portfolio. The IT Strategic Plan will be updated on a regular basis that retains synchronicity with the University’s Strategic Plan. During development, input on the contents of the OTS IT Strategic Plan will be obtained from University leaders in academia, research, and administration. The IT Strategic Plan will be used to align the IT organization and budget with University initiatives and with organizational priorities, goals, and objectives. The IT strategic planning process will include both University business and technology managers. The OTS IT Strategic Plan is based on and supports the VCU 2020 Strategic Plan. This strategic plan articulates the University’s mission and vision for the future. It provides the basis for IT investment decisions so that the identification, selection, control, life cycle management, and evaluation of technology investments are based upon the anticipated business value of the investment. Technology investments are prioritized and executed based on the benefit to be derived towards achieving University strategic goals.
University leaders must play an integral part in the initiation of any technology investment or projects, by defining the business need and the anticipated outcomes. Involvement by the leadership should continue throughout the life cycle of any technology project, continually validating that the project is on track to deliver the desired business value. A critical aspect of technology management is the early and continuous involvement of University leadership in technology investment decision-making and in providing effective oversight after investment decisions are made.

Project Management

For each IT project, the Project Manager is responsible for observing the current University project management standard and taking the actions needed to ensure the success of the project. This begins when a project is initially proposed and continues through its evaluation, execution and control, and closeout phases. At minimum the project manager: a) prepares documentation that is appropriate to the complexity of the project, b) plans and monitors the execution and control phase using methods appropriate to the complexity of the project, and c) obtains appropriate agreement that the project’s goals and objectives have been met and performs Closeout duties as required. The project manager is expected to store and update the project’s documentation and plan in the University’s central repository (PMIT) or in a similar fashion locally. The PM is expected to provide evidence that all required PM activities have been documented and to make them available during any internal or APA audit.

Assessing the complexity of a given project is the responsibility of the Project Manager in consultation with the Project Sponsor. Complexity is measured by several factors including cost, risk, innovation, scope and impact. The Project Complexity Evaluation Scorecard (available on the PMO Web site) is a tool provided to assist project managers determine the complexity of their project. The complexity level can also be assessed by comparing project characteristics to the Table of Project Level Indicators. The project manager is expected to provide documentation commensurate with the complexity of a given project. Projects that score high in cost, risk, or innovation should be supported with documentation that is substantially more detailed and thorough than for a project that scores medium or low in those metrics. Worksheets for Low, Medium, and High Complexity Projects are provided on the PMO Web site for Project Managers’ reference.

Once the complexity is identified, VCU’s Project Management Methodology outlines the standard project management process with further details on specific techniques and requirements for each level of complexity. These techniques and requirements will be updated as needed and are available on the PMO Web site.

Project Management processes are designed to be customizable to accommodate the wide spectrum of IT project characteristics. But, at minimum, all High Complexity IT Projects are required to complete a Project Plan including sections for:

• Project Management Plan Executive Summary;
• Project Performance Plan;
• Budget Plan;
• Risk Management Plan;
• Quality Management and IV&V Plan;
• Work Breakdown Structure;
• Resource Plan;
• Procurement Plan;
• Communications Plan; and
• Change and Configuration Management Plan.

Project Planning is the process of defining and organizing activities and resources to deliver a unique product or service. The Project Plan is the primary document developed during the planning phase of the project lifecycle and communicates project activities in terms of:
• what tasks will be performed;
• who will perform the tasks;
• when will the tasks be performed;
• what resources will be applied to accomplish the tasks; and
• how the tasks will be sequenced.

Once the Execution Phase has begun, the Project Manager will begin reporting against the project’s budget, scope, schedule, and performance using the PMO-supplied form appropriate for the project’s complexity. The Project Manager must track and make available to project stakeholders:
• Key Status Indicators;
• Project Status Assessment;
• Measures of Success;
• Actual Expenses;
• Project Baseline; and
• Project Milestones

Project Managers for High Complexity IT Projects must submit baseline changes resulting in changes to project budget, scope, schedule, and performance for approval through the ITGB. Aggregate changes to the approved project budget, scope, and schedule that are less than 10% of the approved Project Charter, or changes that are less than 10% of the latest approved baseline, must be approved by the project’s sponsor and reported to the ITGB. If there are aggregate changes to the approved project budget, scope, and schedule that are equal to or greater than 10% of the approved Project Charter, or changes that are equal to or greater than 10% of the latest approved baseline, the Project Manager must submit the change request to the ITGB for review.

Closeout is the last phase in the project lifecycle. The Closeout Phase begins when the user accepts the project deliverables, establishing operational products or services, and the project oversight authority concludes that the project has satisfied the project purpose described in the Project Charter. The major focus of the Closeout Phase is administrative
closure, logistics, and documentation of lessons learned or best practices. A Closeout Checklist is available on the PMO Web site.

Project Portfolio Management

Project Portfolio Management (PPM) is a term used to describe treating projects as part of an overall IT investment portfolio. PPM seeks to shift away from one-off, ad hoc approaches to a methodology with a set of values and techniques that enable standardization, measurement and process improvement. At VCU, proven Project Portfolio Management (PPM) best practices will be applied toward the goal of maximizing the total value of all projects undertaken. As in funds management, a project portfolio seeks an optimum mix to maximize return and minimize risk. The Information Technology Governance Board will evaluate all High Complexity Projects based on their contribution to the University’s goals and objectives and their value to the IT Strategic Plan, relative to their cost and risk. Projects with the highest return/risk ratio will be given top priority. The process begins with project selection wherein project proposals are analyzed and ranked based on project costs, benefits, and risks. The ITGB makes investment decisions on which projects to propose for funding, and which mix of projects will best meet strategic University goals. Once projects have been selected, the ITGB monitors the execution of those projects through periodic reviews of project progress against established cost, schedule, and performance baselines. The last phase is the evaluation phase where actual results are compared against planned measures of success, and the business value achieved and actual return on the investment is determined. Lessons learned during the evaluation phase provide feedback for future selection and control processes related to improving PPM.

Auditing

The University will provide for periodic audits of IT strategic planning, expenditure reporting, budgeting, project management, infrastructure, architecture, ongoing operations, and security. The Office of Technology Services will work with the University’s Department of Assurance Services and the Commonwealth’s Auditor of Public Accounts in conducting such audits. Independent Verification and Validation of IT projects will be conducted following guidelines appropriate to the level of project complexity and risk.

Independent Verification and Validation (IV&V)

Project IV&V adds value to management and oversight by:

- Increasing the probability that project products and services meet their requirements;
- Improving product and service performance;
- Supporting a sponsor’s decision to accept a product or service;
- Reducing development cost;
- Shortening the project schedule;
• Reducing risk; and
• Improving project management and oversight review and decision making.

Project managers for Medium and High Complexity Projects are required to include review of the technical, financial, and management aspects of the project and will establish scheduled IV&V reviews and reports as follows:
• At completion of the detailed Project Plan and before project execution begins for Medium and High Complexity;
• One in - progress review during project execution for High Complexity;
• At project closeout to validate the success of the project for High.

Project Managers for all High Complexity IT Projects must develop a comprehensive plan for the project and will incorporate the IV&V schedule in the plan. Project Managers will have direct interface with the IV&V providers and will utilize the findings and recommendations in managing the project. The Project Manager will coordinate contracted vendor review and responses to IV&V findings as appropriate.

Qualified IV&V Service Providers will have experience and training in verification and validation audits commensurate with the scope and nature of the project. In any High Complexity Project IV&V effort, the IV&V Service Providers must be completely independent and have a separate budget and line of responsibility from that of the Project Manager. All IV&V Service Providers must be free of any conflict of interest in a project where they provide IV&V contracted support.
Glossary

A

**Action Plan** – A plan that describes what needs to be done and when it needs to be completed. Project plans are action plans.

**Activity** – An element of work performed during the course of a project. An activity normally has an expected duration, expected cost, and expected resource requirements. Activities are often subdivided into tasks.

**Activity Definition** – The process of identifying the specific schedule activities that need to be performed to produce the various project deliverables. (PMBOK 3RD EDITION)

**Activity Duration** – The time in calendar units between the start and finish of a schedule activity. (PMBOK 3RD EDITION)

**Activity Duration Estimating** – The process of estimating the number of work periods that will be needed to complete individual schedule activities. (PMBOK 3RD EDITION)

**Activity Resource Estimating** - Determining what resources (people, equipment, and materials) are needed in what quantities to perform project activities. (PMBOK 3RD EDITION)

**Actual Cost (AC)** - The costs actually incurred and recorded in accomplishing the work performed during a given time period for a schedule activity or work breakdown structure component. (PMBOK 3RD EDITION)

**Alternative Analysis** - Breaking down a complex situation for the purpose of generating and evaluating different solutions and approaches.

**Analysis** - The detailed study and examination of something, in order to discover more about it (from Cambridge International Dictionary of English). Analysis typically includes discovering parts of the item being studied, as well as how they fit together. An example is the study of schedule variances for cause, impact, corrective action, and results.

**Approve** - To accept as satisfactory. Approval implies that the item approved has the endorsement of the approving entity. The approval may still require confirmation by somebody else, as in levels of approval. In management use, the important distinction is between approved and authorized. See authorization.

**Areas of Responsibility** - Used to define the person or organizational entity responsible for specific policy areas, processes, and procedures as identified.
Authorization - The power granted by management to specified individuals allowing them to approve transactions, procedures, or total systems.

Assumptions – Factors that, for planning purposes, are considered to be true, real, or certain without proof or demonstration.

B

Baseline - The approved time phased plan (for a project, a work breakdown structure component, a work package, or a schedule activity), plus or minus approved project scope, cost, schedule, and technical changes. Generally refers to the current baseline, but may refer to the original or some other baseline. Usually used with a modifier (e.g., cost baseline, schedule baseline, performance measurement baseline, technical baseline). (PMBOK 3RD EDITION)

Benchmarking - A structured approach for identifying the best practices from industry and government, and comparing and adapting them to the organization's operations. Such an approach is aimed at identifying more efficient and effective processes for achieving intended results, and suggesting ambitious goals for program output, product/service quality, and process improvement. (GAO)

Benefit - A term used to indicate an advantage, profit, or gain attained by an individual or organization. (GAO)

Best Practices - The processes, practices, or systems identified in public and private organizations that performed exceptionally well and are widely recognized as improving an organization's performance and efficiency in specific areas. Successfully identifying and applying best practices can reduce business expenses and improve organizational efficiency. (GAO)

Budget - When unqualified, refers to an estimate of funds planned to cover a project or specified period.

Budget At Completion (BAC) - The sum of all the budget values established for the work to be performed on a project or a work breakdown structure component or a schedule activity. (PMBOK 3RD EDITION)

Business Impact Analysis - Identifies project constraints, alternatives, and related assumptions as they apply to the initiation phase.

Business Case - A structured proposal for business improvement that functions as a decision package for organizational decision-makers. A business case includes an analysis of business process performance and associated needs or problems, proposed alternative solutions, assumptions, constraints, and a risk-adjusted cost-benefit analysis. (GAO)

Business Owner – The functional stakeholder whose responsibilities are to identify and
communicate business needs and knowledge for the project, and insure the business needs are appropriately addressed by the project.

**Business Plan** - Model used by a manager for planning and scheduling project work.

**Business Problem** - A question, issue, or situation, pertaining to the business, which needs to be answered or resolved.

**Business Process** - A collection of related, structured activities--a chain of events--that produce a specific service or product for a particular customer or customers. (GAO)

**Business Process Reengineering** - In government, a systematic disciplined improvement approach that critically examines, rethinks, and redesigns mission-delivery processes and sub-processes within a process management approach. In a political environment, the approach achieves radical mission performance gains in meeting customer and stakeholder needs and expectations. (GAO)

**Business Vision** - A description of what senior management wants to achieve with the organization in the future. A business vision usually addresses a medium to long-term period and is expressed in terms of a series of objectives. (GAO)

**Change Control** - Identifying, documenting, approving or rejecting, and controlling changes to the project baselines. (PMBOK 3RD EDITION)

**Change Management Process** - A set of tasks or procedures established to ensure that project performance is measured to the baseline and changes are reviewed, approved, or rejected and the baseline updated.

**Conceptual Project Planning** - The process of developing broad-scope project documentation from which the technical requirements, estimates, schedules, control procedures, and effective project management will all flow.

**Condition** - The key circumstances, situations, etc., that are causing concern, doubt, anxiety, or uncertainty. In a risk statement, the condition phrase is the phrase at the beginning of the statement. (SEI)

**Configuration Management (CM)** - Configuration Management is a formal discipline that provides project team members and customers with the methods and tools that are used to identify the product developed, establish baselines, control changes to these baselines, record and track status, and audit the product.

**Configuration Management System** – A subsystem of the overall project management system. It is a collection of formal documented procedures used to apply technical and administrative direction and surveillance to: identify and document the functional and physical characteristics; record and report each change and its implementation status; and
support the audit of the products, results or components to verify conformance to
requirements. It includes the documentation, tracking systems and defined approved
levels necessary for authorizing and controlling changes. In most application areas, the
configuration management system includes the change control system. (PMBOK 3RD
EDITION)

**Constraint** – The state, quality, or sense of being restricted to a given course of action or
inaction. An applicable restriction or limitation, either internal or external to the project
that will affect the performance of the project or a process. (PMBOK 3RD EDITION)

**Consequence** - The possible negative outcomes of the current conditions that are creating
uncertainty. In a risk statement, the consequence phrase is the phrase at the end of the
statement. (SEI)

**Contingency Planning** - The development of a management plan that identifies
alternative strategies to be used to ensure project success if specified risk events occur.

**Contingency Reserve** - The amount of funds, budget, or time needed above the estimate
to reduce the risk of overruns of project objectives to a level acceptable to the
organization. (PMBOK 3RD EDITION)

**Contract** – When used as a noun in this manual, contract refers to an agreement
enforceable by law, between two or more competent parties, to do or not to do something
not prohibited by law, for a consideration. A contract is any type of agreement or order
for the procurement of goods or services. As a verb, contract has its usual legal sense,
signifying the making of an agreement for consideration. (DGS, APSPM)

**Contract, Fixed Price** - A contract that provides for a firm unit or total price to be
established at the time of order placement or contract award. The contractor bears the
full risk for profit or loss.

**Contract, Fixed Price with Escalation/De-escalation:** A fixed price type of contract
that provides for the upward and downward revision of the stated contract price upon the
occurrence of certain contingencies (such as fluctuations in material costs and labor rates)
specifically defined in the contract. (DGS, APSPM)

**Contract, Cost-Plus-A-Fixed-Fee** - A cost-reimbursement type contract that provides
for the payment of a fixed fee to the contractor. The fixed fee, once negotiated, does not
vary with the actual cost but may be adjusted as a result of any subsequent changes in the
scope of work or services to be performed under the contract. (DGS, APSPM)

**Contract Administration** - The process of managing the contract and the relationship
between the buyer and seller, reviewing and documenting how a seller is performing or
has performed to establish required corrective actions and provide a basis for future
relationships with the seller, managing contract related changes and, when appropriate,
managing the contractual relationship with the outside buyer of the project. (PMBOK
3RD EDITION)
**Control** - Comparing actual performance with planned performance, analyzing variances, assessing trends to effect process improvements, evaluating possible alternatives, and recommending appropriate corrective action as needed. (PMBOK 3RD EDITION)

**Control System** - A mechanism that reacts to the current project status in order to ensure accomplishment of project objectives.

**Core Processes** - Processes that have clear dependencies and that require the same order on most projects.

**Corrective Action** - Documented direction for executing the project work to bring expected future performance of the project work in line with the project management plan. (PMBOK 3RD EDITION)

**Cost Avoidance** – An action taken in the present design to decrease costs in the future.

**Cost Benefit Analysis (CBA)** – An evaluation of the costs and benefits of alternative approaches to a proposed activity to determine the best alternative. (CCA)

**Cost Budgeting** - The process of aggregating the estimated costs of individual activities or work packages to establish a cost baseline. (PMBOK 3RD EDITION)

**Cost Control** - The process of influencing the factors that create variances, and controlling changes to the project budget. (PMBOK 3RD EDITION)

**Cost Estimating** - The process of developing an approximation of the cost of the resources needed to complete project activities. (PMBOK 3RD EDITION)

**Cost Performance Index (CPI)** - A measure of cost efficiency on a project. It is the ratio of earned value (EV) to actual costs (AC). CPI = EV divided by AC. A value equal to or greater than one indicates a favorable condition and a value less than one indicates an unfavorable condition. (PMBOK 3RD EDITION)

**Cost/Schedule Impact Analysis (CSIA)** - The process followed to determine the cost and/or schedule impact of a specific change with a project.

**Cost Variance (CV)** - A measure of cost performance on a project. It is the algebraic difference between earned value (EV) and actual cost (AC). CV=EV minus AC. A positive value indicates a favorable condition and a negative value indicates an unfavorable condition. (PMBOK 3RD EDITION)

**Critical Activity** - Any schedule activity on a critical path in a project schedule. Most commonly determined by using the critical path method. Although some activities are “critical” in the dictionary sense, without being on the critical path, this meaning is seldom used in the project context. (PMBOK 3RD EDITION)
**Critical Path** – Generally, but not always, the sequence of schedule activities that determines the duration of the project. Generally, it is the longest path through the project. However, a critical path can end, as an example, on a schedule milestone that is in the middle of the project schedule and that has a finish-no-later-than imposed date schedule constraint. (PMBOK 3RD EDITION)

**Critical Path Method (CPM)** - A schedule network analysis technique used to determine the amount of scheduling flexibility (the amount of float) on various logical network paths in the project schedule network, and to determine the minimum total project duration. Early start and finish dates are calculated by means of a forward pass using a specified start date. Late start and finish dates are calculated by means of a backward pass, starting from a specified completion date, which sometimes is the project early finish date determined during the forward pass calculation. (PMBOK 3RD EDITION)

**Critical Success Factors** - The limited number of areas of performance that are essential for a project to achieve its goals and objectives. They are the key areas of activity in which favorable results are absolutely necessary to reach goals. Critical success factors are often referred to as “CSF”. (SEI)

**Current Finish Date** - The current estimate of the point in time when a schedule activity will be completed, where the estimate reflects any reported work progress. (PMBOK 3RD EDITION)

**Current Start Date** - The current estimate of the point in time when a schedule activity will begin, where the estimate reflects any reported work progress. (PMBOK 3RD EDITION)

**Customer** – The person or organization that will use the project’s product or service or results. (PMBOK 3rd Edition)

**D**

**Decision Criteria** - A documented set of factors that are used to examine and compare the costs, risks, and benefits of various IT projects and systems. These decision criteria consist of (1) screening criteria, which are used to identify whether new projects meet initial acceptance requirements and ensure that the project is reviewed at the most appropriate organizational level, and (2) criteria for assessing and ranking all projects. These ranking criteria weigh and compare the relative costs, risks, and benefits of each project against all other projects. (GAO)

**Decomposing (Decomposition)** - The process of breaking down activities and the work package to a manageable level.

**Deflection** - The act of transferring all or part of a risk to another party, usually by some form of contract.
**Deliverable** - Any unique and verifiable product, result or capability to perform a service that must be produced to complete a process, phase, or project. Often used more narrowly in reference to an external deliverable, which is a deliverable that is subject to approval by the project sponsor or customer. (PMBOK 3RD EDITION)

**Design Documents** - Technical documents that lay out in detail the anticipated design of the project deliverable.

**Detailed Project Planning** – Activities required to complete a detailed project plan for project execution and control as specified in the Commonwealth Project Management Standard and Guideline.

**Development** - The actual work performed to accomplish, effect, or bring about the Information Technology Project.

**Development Approval** – Approval by the ITIB to proceed with detailed project planning, project execution and control, project closeout, and asset operation and management.

**Discrete Activity** - A task that has a deliverable, is measurable, and has a definite start and finish. An item on the Work Breakdown Structure would be an example of a discrete activity.

**Duration** - The total number of work periods (not including holidays or other nonworking periods) required to complete a schedule activity or work breakdown structure components. Usually expressed as workdays or workweeks. Sometimes incorrectly equated with elapsed time. Contrast with effort. (PMBOK 3RD EDITION)

**Early Finish Date (EF)** - In the critical path method, the earliest possible point in time on which the uncompleted portions of a schedule activity (or the project) can finish, based on the schedule network logic, the data date, and any schedule constraints. Early finish dates can change as the project progresses and as changes are made to the project management plan. (PMBOK 3RD EDITION)

**Early Start Date** - In the critical path method, the earliest possible point in time on which the uncompleted portions of a schedule activity (or the project) can start, based on the schedule network logic, the data date and any schedule constraints. Early start dates can change as the project progresses and changes are made to the project management plan. (PMBOK 3RD EDITION)

**Earned Value (EV)** - The value of completed work expressed in terms of the approved budget assigned to that work for a schedule activity or work breakdown structure component. (PMBOK 3RD EDITION)
**Effort** - The number of labor units required to complete a schedule activity or work breakdown structure component. Usually expressed as staff hours, staff days, or staff weeks. Should not be confused with duration.

**Enterprise** – An organization with common or unifying business interests. An enterprise may be defined at the University level, the college or school level, or the department level for programs and projects requiring either vertical or horizontal integration within the University.

**Enterprise Architecture (EA)** - A method or framework for developing, implementing, and revising business-focused Information Technology (IT) guidance. The resulting guidance describes how the enterprise can best use technology and proven practices to improve the way it does business. EA is described in a series of documents that showcase the development and revision process, the involved parties, and the resulting guidance. The University’s EA relies on its IT governance model (roles and responsibilities), business and technical inputs, and knowledge of how the academic, administrative, and research missions use technology to develop explicit policies, standards, and guidelines for information technology use.

**Enterprise Technology Program** - A group of related IT projects, aggregated for management purposes that support a defined enterprise.

**Estimate** – A quantitative assessment of the likely amount or outcome. Usually applied to project costs, resources, effort, and duration and is usually preceded by a modifier (i.e.,) preliminary, conceptual, feasibility, order of-magnitude, definitive). It should always include some indication of accuracy (e.g. + percent). (PMBOK 3RD EDITION)

**Ethics** – In the conduct of their operations, University organizations and their employees will employ information technology in a legal and ethical manner consistent with government statutes, rules, and regulations. Information technology will not be used for purposes that are unrelated to the state organization’s mission or violates state or federal law. Contract provisions, including software licensing agreements, will be strictly enforced.

**F**

**Feasibility Study** - A formal document that analyzes and discusses a possible solution to a technical or business issue and determines if the solution is practical, reasonable and doable.

**Financial Audit** - A thorough examination of a project by an evaluation team that includes a detailed overview of the project’s financial procedures, budgets, records, etc. It may deal with a project as a whole or the separate individual parts of a project

**Financial Closure** - The process of completing and terminating the financial and
budgetary aspects of the project being performed. It includes both (external) contract closure and (internal) project account closure.

**Fixed price or lump sum contracts** – This category of contract involves a fixed total price for a well-defined product. Fixed price contracts may also include incentives for meeting or exceeding selected project objectives such as schedule targets.

**Float** - The amount of time that a schedule activity can be delayed without delaying the early start of any immediately following schedule activities. Also called slack, total float, and path float. (PMBOK 3RD EDITION)

**Functional Manager** - Someone with management authority over an organizational unit within a functional organization. The manager of any group that actually makes a product or performs a service. (PMBOK 3RD EDITION)

**Functional Organization** - A hierarchical organization where each employee has one clear superior, staff are grouped by areas of specialization, and managed by a person with expertise in that area. (PMBOK 3RD EDITION)

**Functional Requirements** - What the systems/products are, do, or provide from the customer’s point of view.

**Guidelines** - Are directives and specifications, similar to standards, but advisory in nature. In essence, guidelines constitute recommendations which are not binding on University IT projects.

**Impact** - The loss or effect on the project, program, or enterprise if the risk occurs. Impact is one of the three attributes of a risk. (SEI)

**Impact Statement** - A cause and effect report generated at the manager level to show the impact that new projects will have on current schedules and resources as they enter the work stream.

**Implementation** - Occurs when products that have completed testing are moved into production or into their working environment. Normally used as a term on Information Technology projects.

**Independent Project Oversight** - A process that employs a variety of quality control, inspection, test measurement, and other observation processes to ensure that project objectives are achieved in accordance with an approved plan. Project oversight is usually done by an independent entity (separate from the project team) trained or experienced in a variety of management and technical review methods. Project oversight includes both
technical and management oversight.

**Independent Verification and Validation (IV&V)** – A review (or audit) that is performed by an organization that is technically, managerially, and financially independent of the development organization. A quality assurance process carried out by an independent third party.

**Information System** - The organized collection, processing, transmission, and dissemination of information in accordance with defined procedures, whether automated or manual. Information systems include non-financial, financial, and mixed systems. (GAO)

**Information Technology (IT)** - The hardware and software operated by an organization to support the flow or processing of information in support of business activities, regardless of the technology involved, whether computers, telecommunications, or other. In the University, Information Technology means telecommunications, automated data processing, databases, the Internet, management information systems, and related information, equipment, goods, and services.

**Information Technology Investment Management (ITIM)** - An integrated approach to managing IT investments that provides for the continuous identification, selection, control, life cycle management, and evaluation of IT investments. ITIM uses structured processes to minimize risks and maximize return on IT investments.

**Initial Risk Identification** - The process during the initial concept phase of identifying risks that might impact a project. The risk identification process is recommended to evaluate a project.

**Initiating Processes** – Those processes performed to authorize and define the scope of a new phase or project or that can result in the continuation of halted project work. (PMBOK 3RD EDITION)

**Intangible Benefits** – Benefits that are difficult to measure and quantify. Intangible benefits include such things as customer retention, employee retention, and improved customer service.

**Intangible Costs** - Costs that are difficult to measure and quantify. Intangible costs include such things as lost performance and efficiency while the users are getting acquainted with the new system.

**Invitation for Bids (IFB)** - A document, containing or incorporating by reference the specifications or scope of work and all contractual terms and conditions, that is used to solicit written bids for a specific requirement for goods or nonprofessional services. This type of solicitation is also referred to as an Invitation to Bid. (DGS, APSPM)

**IT Investment Management** - An integrated approach to managing IT investments that
provides for the continuous identification, selection, control, life-cycle management and evaluation of IT investments. A structured process to provide a systematic method to minimize risks and maximize return on IT investments. (Meta Group)

**IT Strategic Plan** - A document which aligns IT strategy and investments with University business priorities, goals, and objectives.

**IT Strategic Planning** (ITSP)- An ITIM-based planning methodology that looks at IT resources and projects as capital investments and forms a foundation for the selection, control and evaluation of IT resources and projects as part of a business-driven technology portfolio.

L

**Lessons Learned** – The learning gained from the process of performing the project. Lessons learned may be identified at any point. Also considered a project record, to be included in the lessons learned knowledge base. (PMBOK 3RD EDITION)

**Leadership** - The way in which the project manager influences the project team to behave in a manner that will facilitate project goal achievement.

**Level of Effort (LOE)** - Support-type activity (e.g., seller or customer liaison, project cost accounting, project management, etc.) that does not readily lend itself to measurement of discrete accomplishment. It is generally characterized by a uniform rate of work performance over a period of time determined by the activities supported. (PMBOK 3RD EDITION)

**Life-Cycle Cost** - The overall estimated cost for a particular object over the time corresponding to the life of the object, including direct and indirect initial costs plus any periodic or continuing costs for operation and maintenance. (GAO)

**Line Manager** - (1) The manager of any group that actually makes a product or performs a service. (2) A functional manager.

**Logical Relationship** - A dependency between two project schedule activities, or between a project schedule activity and a schedule milestone. The four possible types of logical relationships are: Finish-to-start, Finish-to-finish, Start-to-start, and Start-to-finish. (PMBOK 3RD EDITION)

M

**Mandatory Projects**- Projects that support legal or regulatory requirements such as Executive orders, state legislation, or Federal mandates.

**Master Schedule** – A summary-level project schedule that identifies the major deliverables and work breakdown structure components and key schedule milestones.
Matrix Organization - Any organizational structure in which the project manager shares responsibility with the functional managers for assigning priorities and for directing the work of persons assigned to the project. (PMBOK 3RD EDITION)

Methodology - The processes, policies, and guidelines that are included as part of the framework for project management.

Milestone - A significant point or event in the project. (PMBOK 3RD EDITION)

Milestone Schedule - A summary-level schedule that identifies the major schedule milestones. (PMBOK 3RD EDITION)

Mission Statement - A concise statement, usually one paragraph, summarizing the purpose and goals of a project.

Mitigate – Dealing with a risk by developing strategies and actions for reducing (or eliminating) the impact, probability, or both, of the risk to some acceptable level. It may also involve shifting the timeframe when action must be taken. (SEI)

Mitigation - Taking steps to lessen risk by lowering the probability of a risk event’s occurrence or reducing its effect, should it occur.

Mitigation Approach - The approach taken to deal with a risk. This can be to accept, research, watch, or mitigate.

Mitigation Plan - An action plan for risks that are to be mitigated. It documents the strategies, actions, goals, schedule dates, tracking requirements, and all other supporting information needed to carry out the mitigation strategy.

Monitor - Collect project performance data with respect to a plan, produce performance measures, and report and disseminate performance information. (PMBOK 3RD EDITION)

Model - A representation of a set of components of a process, system, or subject area. A model is generally developed for understanding, analysis, improvement, and/or replacement of the process. (GAO)

Ongoing Support Cost - The periodic and continuing cost to operate and maintain the product or service delivered by the project.

Operational Project - Project which modifies or enhance an existing process.
Order of Magnitude - An estimate made without detailed data usually produced from cost data. This type of estimate is used during the formative stages of an expenditure program for initial evaluation of the project.

Organizational Breakdown Structure (OBS) - A hierarchically organized depiction of the project organization arranged so as to relate the work packages to the performing organizational units. (PMBOK 3RD EDITION)

Organizational Planning - Identifying, documenting, and assigning project roles, responsibilities, and reporting relationships.

Outcome - The ultimate, long-term, resulting effect--both expected and unexpected--of the customer's use or application of the organization's outputs. (GAO)

Overall Change Control - Coordinating changes across the entire project.

P

Payback Period - The number of years it takes for the cumulative dollar value of the benefits to exceed the cumulative costs of a project. (CCA)

Percent Complete (PC) - An estimate, expressed as a percent, of the amount of work that has been completed, on an activity or a work breakdown structure component. (PMBOK 3RD EDITION)

Performance Gap - The gap between what customers and stakeholders expect and what each process and related sub processes produces in terms of quality, quantity, time, and cost of services and products. (GAO)

Performance Measurement - The process of developing measurable indicators that can be systematically tracked to assess progress made in achieving predetermined goals and using such indicators to assess progress in achieving these goals. (GAO)

Plan - An intended future course of action.

Planning Approval – Approval granted by the CIO to proceed with project planning for the project. Specifically, identification of solutions and development of the business case that supports project development approval.

Planned Value – The authorized budget assigned to the scheduled work to be accomplished for a schedule activity or work breakdown structure component. (PMBOK 3RD EDITION)

Platforms – Personal computing devices, servers, and/or storage systems.

Policy - Are general statements of direction and purpose designed to promote the
coordinated planning, practical acquisition, effective development, and efficient use of information technology resources.

**Portfolio** – A collection of projects or programs and other work that are grouped together to facilitate effective management of that work to meet strategic business objectives. The projects or programs of the portfolio may not necessarily be interdependent or directly related. (PMBOK 3RD EDITION)

**Portfolio Management** – The centralized management of one or more portfolios, which includes identifying, prioritizing, authorizing, managing, and controlling projects, programs, and other related work, to achieve specific strategic business objectives. (PMBOK 3RD EDITION)

**Post Implementation Report** - Documents the successes and failures of a project and suggest follow up actions. It provides a historical record of the planned and actual budget and schedule. Other selected metrics on the project can also be collected, based upon state organization procedures. The report also contains recommendations for other projects of similar size and scope.

**Post-Implementation Review (PIR)** - An evaluation tool that compares the conditions before the implementation of a project (as identified in the business case) with the actual results achieved by the project. (GAO)

**Priority** - The imposed sequences desired with respect to the scheduling of activities within previously imposed constraints.

**Probability** - The likelihood the risk will occur. Probability is one of the three attributes of risk. (SEI)

**Procedure** - A collection of steps that the organization is responsible for implementing to ensure that policies and process requirements are met. Units within the University may use guidelines to develop these procedures.

**Procurement** - The procedures for obtaining goods or services, including all activities from the planning steps and preparation and processing of a requisition, through receipt and acceptance of delivery and processing of a final invoice for payment. (DGS)

**Procurement Cost** - The total estimated cost of the goods or services being purchased.

**Product** - General terms used to define the result of a project delivered to a customer.

**Product Description Statement** - A non-formal, high-level document that describes the characteristics of the product/process to be created.

**Program** – A group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually. Programs may include
elements of related work outside of the scope of the discrete projects in the program.
(PMBOK 3RD EDITION)

**Program Manager** – A centralized coordinated management of a program to achieve the program’s strategic objectives and benefits. (PMBOK 3RD EDITION)

**Progress Analysis** - The evaluation of progress against the approved schedule and the determination of its impact. For cost, this is the development of performance indices.

**Program Evaluation and Review Technique (PERT)** - An event-oriented network analysis technique used to estimate project duration when there is a high degree of uncertainty with the individual activity duration estimates. PERT applies the critical path method to a weighted average duration estimate.

**Project** - A temporary endeavor undertaken to create a unique product, service or result. (PMBOK 3RD EDITION)

**Project Administration** - Making Project Plan modifications; may result from such things as: new estimates of work still to be done, changes in scope/functionality of endproduct(s), resource changes, and unforeseen circumstances. It includes monitoring the various Execution Phase activities, monitoring risks, status reporting, and reviewing/authorizing project changes as needed.

**Project Business Objective** - A desired result produced by a project that answers or resolves a business problem.

**Project Charter** – A document issued by the project initiator or sponsor that formally authorizes the existence of a project, and provides the project manager with the authority to apply organizational resources to project activities. (PMBOK 3RD EDITION)

**Project Communications Management** - Includes the processes required to ensure timely and appropriate generation, collection, distribution, storage, retrieval, and ultimate disposition of project information. (PMBOK 3RD EDITION)

**Project Concept Document (PCD)** - The document that is the foundation for making a decision to initiate a project. It describes the project purpose and presents a preliminary business case for pursuing the project. It gives decision makers the opportunity to determine project viability.

**Project Cost** - The total cost to provide the business driven, technology-based product or service. The costs include the hardware, software, services, installation, management, maintenance, support, training, and internal staffing costs planned for the project. Internal staffing costs are the apportioned salaries and benefits of the project team members.

**Project Cost Management** - Includes the processes involved in planning, estimating,
budgeting, and controlling costs so that the project can be completed within the approved budget. (PMBOK 3RD EDITION)

**Project Description** – An initial, high-level statement describing the purpose, benefits, customer(s), general approach to development and characteristics of a product or service required by the organization.

**Project Duration** - The elapsed time from project start date through to project finish date.

**Project Human Resource Management** - Includes the processes that organize and manage the project team. (PMBOK 3RD EDITION)

**Project Initiation** - The conceptual development phase of a project. A process that leads to approval of the project concept and authorization (through a charter) to begin detailed planning. In the University Project Initiation is also referred to as “Project Planning” or “planning for the project” not to be confused with the Detailed Project Planning.

**Project Integration Management** - Includes the process and activities needed to identify, define, combine, unify and coordinate the various processes and project management activities within the Project Management Process Groups. (PMBOK 3RD EDITION)

**Project Management (PM)** - The application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. (PMBOK 3RD EDITION)

**Project Manager** - The person assigned by the performing organization to achieve the project objectives. (PMBOK 3RD EDITION)

**Project Measures of Success** - The measurable, business-oriented indicators that will be used to assess progress made in achieving planned project objectives.

**Project Oversight** - A process that employs a variety of quality control, inspection, test measurement, and other observation processes to ensure that planned project objectives are achieved in accordance with an approved plan. Project oversight includes both technical and management oversight. Project oversight is usually done by an independent entity (separate from the project team) trained or experienced in a variety of management and technical review methods.

**Project Phase** - A collection of logically related project activities, usually culminating in the completion of a major deliverable. (PMBOK 3RD EDITION)

**Project Plan** - A formal, approved document used to guide both project execution and project control. The primary uses of the Project Plan are to document planning assumptions, decisions and project baselines; facilitate communication among stakeholders; and, essentially describe how the project will be executed and controlled.
Project Planning – Activities to conduct effective initial analysis of business needs and potentially useful technologies required for development of a detailed business case, incorporating a comprehensive definition of scope and supported by sound financial and cost based analysis.

Project Procurement Management - Includes the processes to purchase or acquire the products, services, or results needed from outside the project team to perform the work. (PMBOK 3RD EDITION)

Project Quality Management - Includes the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken. (PMBOK 3RD EDITION)

Project Risk Management - Includes the processes concerned with conducting risk management planning, identification, analysis, responses, and monitoring and control on a project. (PMBOK 3RD EDITION)

Project Schedule - The planned dates for performing schedule activities and the planned dates for meeting schedule milestones. (PMBOK 3RD EDITION)

Project Scope - The work that must be performed to deliver a product, service, or result with the specified features and functions. (PMBOK 3RD EDITION)

Project Scope Management - Includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully. (PMBOK 3RD EDITION)

Project Sponsor - An individual, usually part of the organization management team, who makes the business case for the project. This individual usually has the authority to define project goals, secure resources, and resolve organizational and priority conflicts.

Project Team Members - The individuals that report either part time or full time to the project manager and are responsible for the completion of project tasks.

Project Time Management - Includes the processes required to accomplish timely completion of the project. (PMBOK 3RD EDITION)

Project Transition Checklist - A document that ensures that the activities of the Planning Phase have been finished, reviewed, and signed off so that the project may move from the Planning Phase into the Execution Phase.

Projectized Organization - Any organizational structure in which the project manager has full authority to assign priorities, apply resources, and to direct the work of persons assigned to the project. (PMBOK 3RD EDITION)
**Proprietary Specification** - A specification that restricts the acceptable product(s) or service(s) to that of one or more manufacturer(s) or vendor(s). A common example would be the use of a “brand name” specification that would exclude consideration of proposed “equals.” Although all sole source specifications are proprietary, all proprietary specifications are not sole source. Proprietary items may be available from several distributors through competitive bidding.

**Q**

**Quality** – A composite of attributes (including performance features and characteristics) of the product, process, or service required to satisfy the need for which the project is undertaken.

**Quality Assurance (QA)** - (1) The process of evaluating overall project performance on a regular basis to provide confidence that the project will satisfy the relevant quality standards. (2) The organizational unit that is assigned responsibility for quality assurance.

**Quality Control (QC)** - (1) The process of monitoring specific project results to determine if they comply with relevant quality standards and identifying ways to eliminate causes of unsatisfactory performance. (2) The organizational unit that is assigned responsibility for quality control.

**Quality Management** - A collection of quality policies, plans, procedures, specifications, and requirements is attained through quality assurance (managerial) and quality control (technical).

**Quality Planning** - The process of identifying which quality standards are relevant to the project and determining how to satisfy them. (PMBOK 3RD EDITION) The process of monitoring specific project results to determine if they comply with relevant quality standards and identifying ways to eliminate causes of unsatisfactory performance.

**R**

**Requirement(s)** – A statement or set of statements that define what the user(s) of a product want that product to do. Generally, it defines what capabilities a product needs to have, based on the needs of the users.

**Requirements Document** - A formal document that consists of a statement or set of statements that define product functions and capabilities as set by the end user.

**Request for Information (RFI)** - An informal document issued when an agency is not aware of the products available in the market which may satisfy its requirements. The use of an RFI does not require a purchase requisition, however a RFI may result in the development of a requisition, or the issuance of an IFB or RFP after the University determines the types of products that are available which will satisfy its requirements.
An RFI cannot be made into an agreement. (DGS - APSPM)

**Request for Proposals (RFP)** - All documents, whether attached or incorporated by reference, utilized for soliciting proposals; the RFP procedure requires negotiation with offerors (to include prices) as distinguished from competitive bidding when using an Invitation for Bids. (DGS - APSPM)

**Reserve** - A provision in the project management plan to mitigate cost and/or schedule risk. Often used with a modifier (e.g., management reserve, contingency reserve) to provide further detail on what types of risk are meant to be mitigated. The specific meaning of the modified term varies by application area.

**Resource** - Skilled human resources (specific disciplines either individually or in crews or teams), equipment, services, supplies, commodities, material, budgets, or funds. (PMBOOK 3rd Edition)

**Return on Investment (ROI)** - A figure of merit used to help make capital investment decisions. ROI is calculated by considering the annual benefit divided by the investment amount. (GAO)

**Risk** – An uncertain event or condition that, if it occurs, has a positive or negative effect on a project’s objectives. (PMBOK 3RD EDITION)

**Risk Acceptance** – A risk response planning technique that indicates that the project team has decided not to change the project management plan to deal with a risk, or is unable to identify any other suitable response strategy. (PMBOK 3RD EDITION)

**Risk Analysis** - A technique to identify and assess factors that may jeopardize the success of a project or achieving a goal. The technique also helps define preventive measures to reduce the probability of these factors from occurring and identify countermeasures to successfully deal with these constraints when they develop. (GAO)

**Risk Avoidance** – A risk response planning technique for a threat that creates changes to the project management plan that are meant to either eliminate the risk or to protect the project objectives from its impact. (PMBOK 3RD EDITION)

**Risk Assessment** - Review, examination, and judgment of whether or not the identified risks are acceptable. Initial risk assessment is used as a tool to determine project oversight requirements.

**Risk Control** - Involves executing the Risk Management Plan in order to respond to risk events over the course of the project.

**Risk Event** - A discrete occurrence that may adversely or favorably affect the project.

**Risk Identification** – The process of determining which risks might affect the project
and documenting their characteristics. (PMBOK 3RD EDITION)

**Risk Management** - The process of identifying, analyzing, and responding to risk factors throughout the life of a project and in the best interests of its objectives. The art and science of identifying, analyzing, and responding to risk factors throughout the life of a project and in the best interests of its objectives.

**Risk Management Plan** - The document describing how project risk management will be structured and performed on the project. (PMBOK 3RD EDITION)

**Risk Mitigation** - A risk response planning technique associated with threats that seeks to reduce the probability of occurrence or impact of a risk to below an acceptable threshold. (PMBOK 3RD EDITION)

**Schedule Development** - The process of analyzing schedule activity sequences, schedule activity durations, resource requirements, and schedule constraints to create the project schedule. (PMBOK 3RD EDITION)

**Scope** - The sum of the products, services, and results to be provided as a project. (PMBOK 3RD EDITION)

**Scope Change** - Any change to the project scope. A scope change almost always requires an adjustment to the project cost or schedule. (PMBOK 3RD EDITION)

**Scope Creep** – Adding features and functionality (project scope) without addressing the effects on time, costs, and resources, or without customer approval. (PMBOK 3RD EDITION)

**Scope Definition** - The process of developing a detailed project scope statement as the basis for future project decisions. (PMBOK 3RD EDITION)

**Scope Planning** - The process of creating a project scope management plan. (PMBOK 3RD EDITION)

**Scope Statement** – A document capturing the sum of products and services to be provided as a project. The Scope Statement is part of the Project Plan.

**Scope Verification** - The process of formalizing acceptance of the completed project deliverables. (PMBOK 3RD EDITION)

**Server** – A computer that provides some service for other computers connected to it via a network.

**Services** - Any activities performed by an independent contractor wherein the service
rendered does not consist primarily of acquisition of equipment or materials, or the rental of equipment, materials and supplies (Code of Virginia, § 2.2-4301).

**Slack** – Term used in PERT or arrow diagramming method for float. (PMBOK 3RD EDITION)

**Slippage** – The tendency of a project to exceed original estimates of budget and time.

**Software** - A general term that refers to all programs or instructions that are used to operate computer hardware. Software causes computer hardware to perform activities by telling a computer how to execute functions and tasks.

**Sole Source** - A product or service which is practicably available only from one source. (DGS – APSPM)

**Specification Documents** - Documents that provide specific information about the project deliverable characteristics.

**Stakeholder** - Persons and organizations such as customers, sponsors, performing organization and the public, that are actively involved in the project, or whose interests may be positively or negatively affected by execution or completion of the project. (PMBOK 3RD EDITION)

**Standards** - Are specific and, where applicable, technical documents containing directives and mandatory specifications governing the management, development, and use of information technology resources. (COV ITRM STANDARD GOV2000-01.1)

**Statement of Work (SOW)** - A narrative description of products, services or results to be supplied. (PMBOK 3RD EDITION)

**Status Reports** - A report containing information on a specific project, indicating if the project is ahead of schedule, on schedule, or behind schedule in relation to the project plan.

**Storage** – Computer storage is the holding of data in an electromagnetic form for access by a computer processor. Primary storage is data in random access memory (RAM) and other "built-in" devices. Secondary storage is data on hard disks, tapes, and other external devices.

**Successor Activity** – The schedule activity that follows a predecessor activity, as determined by their logical relationship. (PMBOK 3RD EDITION)

**T**

**Tangible Benefits** - Benefits that can be measured and quantified. Tangible benefits include savings that result from improved performance and efficiency.
**Tangible Costs** – Costs that can be measured and quantified. Tangible costs include costs for hardware, software, people, and supplies for both the development process and ongoing operations.

**Task** – Well defined components of project work. Often a task is referred as a work package.

**Transformational Projects** - Projects that change the way an organization does business.

**Technology infrastructure** - Means telecommunications, automated data processing, word processing and management information systems, and related information, equipment, goods and services.

**Technology Investments** – Assets such as business-driven applications, data, facilities, IT human resources, infrastructure, services, operations and processes used to support the flow or processing of information for business activities.

**Technology Portfolio** - A management tool comprised of essential information about technology investments, structured to facilitate the evaluation of investment alternatives in support of an agency’s overall strategic business plan.

**Technical Specifications** - Specifications that establish the material and performance requirements of goods and services.

**Telecommunications** - Any origination, transmission, emission, or reception of signals, writings, images, and sounds or intelligence of any nature, by wire, radio, television, optical or other electromagnetic systems.

**Telecommunications Equipment** - Defined as, but not limited to: channel service units, data compression units, line drivers, bridges, routers, and Asynchronous Transfer Mode switches (ATM), multiplexers and modems. Also, private branch exchanges (PBX), Integrated Services Digital Network (ISDN) terminal equipment, voice mail units, automatic call distribution (ACD), voice processing units and key systems. Video communications products such as: coders, multi-point conferencing units and inverse multiplexers.

**Telecommunications facilities** - An apparatus necessary or useful in the production, distribution, or interconnection of electronic communications for state agencies or institutions including the buildings and structures necessary to house such apparatus and the necessary land.

**Telecommunications Services** - These services include, but are not limited to; data communication services, such as point-to-point and multipoint circuits, Internet, Frame Relay SMDS, ATM, and dial up lines, and voice communications services such as
Centrex, business/private lines and WATS lines including 800 services, tie and access lines, long distance services, voice mail, pay phones, wireless communications and cellular services (see also “Public Telecommunications Services”).

**Template** – A partially complete document in a predefined format that provides a defined structure for collecting, organizing and presenting information and data. Templates are often based upon documents created during prior projects. Templates can reduce the effort needed to perform work and increase the consistency of results. (PMBOK 3RD EDITION)

**Testing** - The actual test of the products or processes created within the development phase of an Information Technology project.

**Timeframe** - The period when action is required to mitigate the risk. Timeframe is one of the three attributes of risk. (SEI)

**Total Cost** - The sum of all cost (fixed and variable) for a particular item or activity over a specified period.

**Total Cost of Ownership (TCO)** - A calculation of the fully burdened cost of owning a component. The calculation helps consumers and enterprise managers assess both direct and indirect costs and benefits related to the purchase of IT components. For the business purchase of a computer, the fully burdened costs can also include such things as service and support, networking, security, user training, and software licensing.

**Triggers** - Indications that a risk has occurred or is about to occur. Triggers may be discovered in the risk identification process and watched in the risk monitoring and control process. (PMBOK 3RD EDITION)

**Validation** - The technique of evaluating a component or product during or at the end of a phase or project to ensure it complies with the specified requirements. Contrast with verification. (PMBOK 3RD EDITION)

**Variance** – A quantifiable deviation, departure, or divergence away from a known baseline or expected value. (PMBOK 3RD EDITION)

**Verification** – The technique of evaluating a component or product at the end of a phase or project to assure or confirm it satisfies the conditions imposed. Contrast with validation. (PMBOK 3RD EDITION)

**Work Breakdown Structure (WBS)** - A deliverable-oriented hierarchical decomposition of the work to be executed by the project team to accomplish the project
objectives and create the required deliverables. It organizes and defines the total scope of the project. Each descending level represents an increasingly detailed definition of the project work. The WBS is decomposed into work packages. The deliverable orientation of the hierarchy includes both internal and external deliverables. (PMBOK 3RD EDITION)

**Work Package** - A deliverable or project work component at the lowest level of each branch of the work breakdown structure. The work package includes the schedule activities and schedule milestones required to complete the work package deliverable or project work component. (PMBOK 3RD EDITION)

**Workaround** – A response to a negative risk that has occurred. Distinguished from contingency plan in that a workaround is not planned in advance of the occurrence of the risk event. (PMBOK 3RD EDITION)