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GM-08-101 Technology Project Management

Issue Date: 7/01/2008

Revision Effective Date: 7/01/2008

GUIDELINE



PROJECT MANAGEMENT AS A BEST PRACTICE

GTA recommends that agencies utilize a project management process for all projects that have a technology component regardless of the dollar value of the project. Application of these principles should be tailored according to the size, complexity and importance of the project. Therefore, a simple or small project may only require that a project schedule and resources be tracked to ensure that the project remains on course (e.g. use of [Microsoft Project](#) [3] application), whereas a large multi-year project may require a rigorous methodology (e.g. the Rational Unified Process).



GTA's PROJECT MANAGEMENT LIFE CYCLE MODEL

GTA reviews project concepts (Agency Project Requests ?APR?s) for IT projects with a total cost of \$100,000 and above.

Once a project concept is approved, GTA recommends following the five core processes of a Project Management Life Cycle modeled after the principles in the Project Management Institute?s (PMI?s [Project Management Body of Knowledge \(PMBOK\)](#) [4]. The PMBOK is located in the EPMO Methodology site. Also in this site is Georgia Technology?s PMO Project Guide. These core processes are: Initiation, Planning, Execution, Control, and Closeout. Because every project and every organization is different, these industry standard project management principles should be tailored to the size, complexity and importance of the project. Whichever approach or model is chosen, the principles from the PMBOK associated with the five core processes discussed below should be followed.

2.1 INITIATION ? *Project Initiation* is the first process of the project life cycle, usually represented by an Agency Project Request (APR) ?concept? document. The APR specifies what the project should accomplish and provides preliminary estimated costs, and project durations. It contains the business problem that initiated the project.

In addition to the APR, *Project Initiation* has three main objectives: 1) the identification of key project participants, 2) the research and development of the preliminary project charter and scope statement, and 3) the development of a preliminary budget with the approval and funding.

2.1.1 The major activities of the *Initiation Process* are:

2.1.1.1 Business problem description;

2.1.1.2 Approach overview;

2.1.1.3 Proposed solution to the business problem, with options included;

2.1.1.4 Options and alternatives for initiating the project and not initiating it;

2.1.1.5 Resource (staff) planning;

2.1.1.6 Budget planning;

2.1.2 Key project individuals should be named and their roles clearly defined during this process: project manager, Business Owner and/or Executive Sponsor, as well as other stakeholders.

2.1.3 A preliminary project scope statement and project charter should be developed that describes: the business needs, project objectives and deliverables, potential solutions and preliminary recommendations, critical success factors, project financials, and assumptions and constraints.

2.1.4 A preliminary budget with approval and funding must be obtained before moving to the next phase or process group.

2.2 PLANNING ? The *Planning Process* follows the *Initiation Process* in the project life cycle. It defines those activities that will move the business owner from the current ?concept? state to the desired future state.

2.2.1 The primary purpose of the *Planning Process* is to:

2.2.1.1 Establish business requirements;

2.2.1.2 Establish project scope and costs;

2.2.1.3 Develop a schedule, a list of deliverables and delivery dates;

2.2.1.4 Establish a staffing plan;

2.2.1.5 Develop the project management plan (PMP) that describes the project strategy and approach for the project team. The document may be updated multiple times during the project, as needed. For example, when multiple project phases are used for complex projects, or if multiple software releases are involved for application development projects, an updated plan is distributed to the project team. The plan should include input from the above items (examples for content) and;

2.2.1.6 Obtain management approval before moving to the next phase or process group in the project life cycle:

2.2.2 Major activities accomplished during the *Planning Process* are:

2.2.2.1 Scope planning;

2.2.2.2 Project schedule development (work breakdown structure);

2.2.2.3 Workforce (staff) planning;

2.2.2.4 Financial planning;

2.2.2.5 Procurement planning;

2.2.2.6 Communication planning;

2.2.2.7 Quality and performance measurement planning;

2.2.2.8 Risk Management planning.

2.3 EXECUTION ? *Project Execution* is usually the longest core process of the project life cycle and typically consumes the most energy and resources. During this process, the Project Management Plan (PMP) that was developed during the *Planning Process* is implemented, and project deliverables are built and presented to the customer for signoff.

2.3.1 Key activities in this core process include (among other activities specified in the Project Management Plan - PMP):

2.3.1.1 Project Plan Execution, based on the project schedule.

2.3.1.2 Review of Metrics and Status Reports.

2.3.1.3 Execution of the Change Control Process that defines the procedures to handle any changes introduced.

2.3.1.4 Training and education needed by customers, core project team members, end users, and post go-live support personnel (e.g., Operations, Service Desk) is executed based on the master project schedule that should contain ?training activities?. The training plans should have been added to the PMP during the planning process, with budget approval occurring prior to it?s? addition into the PMP.

2.3.1.5 For application development projects, and hardware (infrastructure) ?roll-out? projects (among other project types), testing occurs. If testing tools are needed, and/or if hardware and software is needed for the project, those should have been approved and purchased during the planning process. When applicable, a detailed test plan should have also been developed and approved (additional budget included, if applicable) during the planning process and distributed to the core team. Content for these areas should be included in the PMP for project team members.

2.3.2 The Project Manager should deliver these critical items during this process

(among other deliverables specified in the Project Management Plan - PMP):

2.3.2.1 Performance measurement which includes finding variances between planned and actual work, cost and schedule.

2.3.2.2 Providing Project Status Report to all key stakeholders to provide visibility.

2.3.3 The Project Key stakeholders are responsible for (among other deliverables specified in the Project Management Plan - PMP):

2.3.3.1 Review of the metrics and variances;

2.3.3.2 Taking the necessary action of variances determined to ensure the project is completed within time and budget.

2.4 CONTROL ? *Project Control* occurs concurrently within all core processes of the project. Project control is the process for monitoring, evaluating, and responding to activities or events that can jeopardize the project's success. These include risk response control, schedule control, scope control, quality control, and budget control for the project. Key activities include:

2.4.1 Measure against the performance measurement baselines,

2.4.2 Determine variances and if they warrant corrective action or a change;

2.4.3 For software application development projects, develop a configuration management Plan (CMP). This plan is used to define processes and procedures that will be used to control product releases. The product could be hardware or software (or both), or documentation.

2.4.4 Provide team members and customers with the methods, tools and education needed to establish baselines, control changes to the baselines, and record and track statuses.

2.4.5 Perform integrated change control; and,

2.5 CLOSE-OUT ? Project close-out is an important core process of the project management life cycle and at a minimum consists of:

2.5.1 Administrative Close ? Those administrative activities needed to close the project including project records and project and team performance information.

2.5.2 Contract Close ? Those contractual actions needed to make the contract file complete including records of project deliverables acceptance, vendor performance information, and any other information needed by the procurement officer to close the files.

2.5.3 Transition to ongoing operations ? The project should be properly turned over to the appropriate owner. Lessons learned and other relevant information is passed on to ensure a smooth ongoing operation of the system.

REFERENCES

- GTA [Enterprise Program Management Office \(EPMO\) Methodology](#) [4]
- The Project Management Institute (PMI) [Project Management Body of Knowledge \(PMBOK\)](#) [4]

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