

**University of California, Berkeley
OE (Operational Effectiveness &
OCIO TPO (Technology Program Office)**



**Introduction to the UC Berkeley
Project Management
Methodology**

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Introduction to the UC Berkeley Project Management (PM) Methodology

This guide introduces UC Berkeley staff to the campus project management methodology.

The Operational Excellence Program Office (OE PO) and the OCIO Technology Program Office (TPO) use this PM methodology to manage their projects and to help supported project managers, from the beginning discussion and project initiation of a proposed project through the final delivery and project closure of that successful project. It describes the five phases of the campus PM methodology, and the document templates and guides that promote success for campus project teams. Templates and guides can be downloaded from the website at

<http://technology.berkeley.edu/cio/tpo/project/pmresources/>.

Please send your suggestions for improving this guide and associated templates to pm@berkeley.edu.

Introduction to Project Management

A **project** is a temporary and one-time undertaking that has the following four characteristics:

- An objective to be completed against certain specifications (requirements)
- A defined start and end date
- Consumes resources (e.g., money, people, and equipment)
- Creates a unique product or service

Project management is the discipline of organizing and managing resources (e.g., people) in such a way that the project is completed within the defined scope, quality, time, and cost constraints.

Another definition is the process of organizing and managing resources to complete the project to specification, on time, within budget, and to the customers' satisfaction.

Project management is a process that a person or organization uses to guide and frame activities to:

- Effectively and efficiently define project success
- Develop an appropriate project plan
- Monitor and control the execution of project activities
- Manage project completion, through closure – including the successful transfer of project results into operation
- Document the lessons learned from the project, in a way that future project teams can benefit from the experience and write-up

Why Use the Campus Project Management Methodology

As opposed to using the “just do it” approach, projects are much more likely to succeed if they follow a simple and clearly defined project management methodology. Using a project management methodology also benefits project managers and project teams by helping to:

- Produce higher quality products and services
- Improve communication among all project stakeholders including project team members
- Improve the chance of successfully completing projects on time and on budget
- Increase customer satisfaction with delivered products and services

Preparation for Starting a Project

A project starts with an idea about creating a new or revised service, process, event, or other solution to meet a campus need. For the idea to be realized, a **project sponsor** who has the appropriate campus authority to champion the development of a project to create the service or product must be identified. The project sponsor has ultimate authority over the project, provides project resources including funding, resolves issues, and provides high-level direction for the project. The project sponsor is a temporary position that ends when the project is complete. A project needs to have at least one and no more than three project sponsors. Experience has shown that campus projects with more than three project sponsors are much more likely to fail. For some projects, there is an executive project sponsor who has ultimate authority over the project, and a working project sponsor appointed by the executive project sponsor. The working project sponsor approves scope changes.

The project sponsor needs to take the following actions before beginning the project:

- Define the business objectives that the project seeks to address, including how the products or services created by project will add value to the campus and achieve strategic goals.
- Identify the functional owner who will oversee the operation of the system or service when the project is complete. The functional owner will help define the business processes and rules that are to be incorporated into the system's functionality.
- Identify the key time, financial, technical, and legal constraints for the project.
- Identify the significant assumptions about the project. Assumptions are factors that, for project planning purposes, are considered to be true and do not require proof.
- Provide or secure the project funding.
- Identify the project manager. The project manager is also a temporary position responsible for the overall project management process and, ultimately, for the success of the project. The project manager looks to the project sponsor to provide the required help to acquire needed resources and to help navigate the project politics, especially the blending of stakeholder requirements and support.

Finally, the project sponsor needs to make sure that a **steering committee** is established that is responsible for reviewing project progress and making decisions about proposed changes to the project's scope. For a small project, the steering committee may simply be the project sponsor. For larger projects that have campus wide impact, the project should have a steering committee composed of key project

stakeholders including the project sponsor. When the steering committee is being formed, the members need to know if the committee is empowered to make final decisions about the project or are simply making recommendations to the project sponsor who will make the final decisions. Steering committees are most effective when they are kept to no more than eight members, with each member having resources devoted to the project and strongly committed to the project's success

Overview of the Campus Project Management Methodology

When the project preparations are complete, the project manager uses the UC Berkeley project management methodology to conduct the project. It is based upon the Project Management Institute's project methodology and has been demonstrated to be effective for projects conducted on the Berkeley campus. The methodology is divided into five phases:

1. Initiation
2. Planning
3. Execution
4. Monitor & Control
5. Closure

Figure 1, below, represents the process from initial analysis and project definition by the project sponsor and stakeholders who want something done, through kickoff of project planning, execution, and, finally, project closure. Each box in the diagram represents a phase of the project management process and contains a list of the project management documents that could be created during that phase.

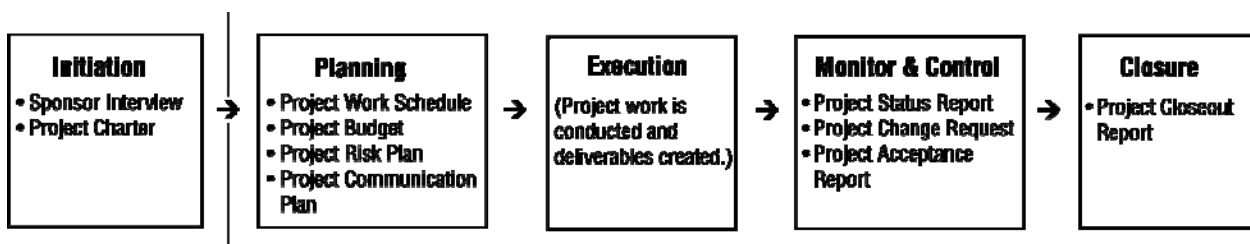


Figure 1: Overview of the Project Management Methodology

The five phases of the project management methodology are not always conducted in a strictly sequential manner. For example, sometimes tasks conducted during the Execution Phase begin prior to the completion of the Planning Phase, and some planning tasks begin prior to the formal completion of the Initiation Phase. For most projects, it is the crossing of the vertical line in Figure 1 from the Initiation Phase to the Planning Phase that represents the formal start of a project.

Description of the Fives Phases of a Project

Following, is a summary of the activities conducted during the five project phases of the official campus project management methodology.

1. Initiation Phase

The project sponsor conducts or supervises the analysis process that is used to define the project including its goals, objectives, scope, deliverables, measurements of success, and constraints such as money or time. The analysis should determine the following:

- Are aligned with the campus OE, IT, and other affected Strategic Plans.
- Meet the goals of the unit or department that will be the functional owner.
- Have adequate funding to support the project's development and the ongoing operation of the services.
- Comply with appropriate campus policies and state and federal laws.
- Provide the campus with appropriate academic, financial, or social benefit to justify the investment of resources.

The project sponsor assigns or hires a project manager. The project manager interviews the project sponsor to learn about the project requirements including objectives, scope, deliverables, measurements of success, and constraints. The project manager in consultation with the project sponsor identifies all of the project stakeholders.

A **project stakeholder** is any person or group that is affected by the execution and success or failure of a project. This includes team members, resource owners, end users, and operational owners of the project.

Based upon the information collected from the project sponsor interview and consultation with the project stakeholders, the project manager creates a project charter using the template available which is reviewed and approved by the project sponsor. When the project sponsor approves the charter, the project is formally authorized and the project manager is empowered to use the resources specified in the charter to conduct the project.

The output from the Initiation Phase is the Project Charter that the project sponsor has reviewed, approved, and signed which includes a preliminary Project Scope Statement.

2. Planning Phase

The planning process begins with the project manager facilitating a discussion among the initially assigned project team members to identify and document what it will take to

complete the project including: tasks, milestones, deliverables, and resources. The team identifies a project schedule, key project risks, financial resources required to complete the task, how it will communicate as well as an effective Change Management plan. The information captured in the project planning documents is also gathered from interviews with project stakeholders and experts outside of the project team.

The output of this phase is an approved Project Overview Plan that includes:

- A Project Work Plan (Schedule)
- A Project Budget
- A Project Risk Plan
- A Project Communications Plan
- A Project Change Management Plan
- Project Metrics

3. Execution Phase

The project manager coordinates teams and resources to carry out the plan(s) to meet the milestones and produce the deliverables. Key to the Execution phase are:

- Acquiring a Project Team
- Directing and Managing Project Execution
- Performing Quality Assurance
- Information Distribution

4. Monitor & Control Phase

The project team monitors the execution of the project against the detailed project plan to ensure that project objectives are met by performing such activities as measuring progress against the plan and conducting status meetings. The Monitor and Control activities also include managing team morale, and monitoring project communications to determine if they are effective and efficient among all project stakeholders.

Proposed project changes are submitted as Project Change Control Request(s) that are reviewed and approved or declined by the project steering committee. If approved, the Project Charter and/or the detailed Project Plan will be modified to incorporate the change(s).

Key to the Monitor and Control phase are:

- Project Status Reports
- Project Risk Monitoring and Control
- Project Schedule Control
- Project Cost Control
- Project Scope Control

5. Closure Phase

During the project closure phase, the project manager keeps the project team focused on project completion. The project team conducts reviews to ensure that the project deliverables are completed and meet the specifications identified in the success criteria. This information is recorded in the Project Acceptance Report. The project team also identifies and documents the lessons learned so that future project teams can benefit from the team's experience. This is documented in the Project Closeout Report. Lastly, project documentation is archived.

Key to the Closure Phase are:

- Project Deliverables are transitioned
- Project Acceptance Report is completed
- Project Closeout Report is completed
- Project Documentation is archived

The Flow of Project Phases

As stated earlier, the project closure *phase* is many times the most difficult phase of a project to complete. Especially if the previous phases were missing elements described above. Managers also want to reassign project team members before project closure is completed. Following a good PM methodology helps ensure that the project is completed according to its written requirements and specifications and is successfully transitioned to operations.

Description of the Project Documents

The project management methodology templates and guides include the following documents:

1. Initial [Sponsor Interview](#) (Initiation Phase) — gives the project manager an opportunity to learn what the project sponsor wants the project to accomplish and what resources the project sponsor will provide. By the end of the interview, the project manager should be able to answer the following questions:
 - What are the business goals and objectives of the project?
 - What resources can the project sponsor provide for the project?
 - What will the project team deliver to the project sponsor by the end of the project?
 - Who does the project sponsor think are the key project stakeholders?
 - What does the project sponsor think are the high-level project risks?
 - How will the project sponsor measure the success of the project?

The project sponsor's answers to the questions are used by the project manager to write the project charter.

2. [Project Charter](#) (Initiation Phase) — is a contract between the project sponsor and the project team describing:
 - The business goals and objectives of the project.
 - The resources the project sponsor promises to provide for the project.
 - What the project team will deliver to the project sponsor by the end of the project.
 - The project team members and key project stakeholders as well as their roles and responsibilities.
 - The high-level project risks.
 - The project's success measurements.
 - The project's impact on other campus departments and systems.

The charter defines the boundaries of the project and is approved by the project sponsor. After the project sponsor has approved the project charter, any proposed changes to the project scope, overall budget, or project completion date require that a Project Change Request be prepared and approved by the project steering committee.

3. [Project Work Schedule](#) (Planning Phase) — describes the tasks that will take place during the project and assigns responsibility and deadlines for those tasks. It includes the duration and deadline for each task and the interrelationships among the tasks. The Project Work Schedule is a map of all of the work that must be conducted during the project. It should be updated throughout the course of the project as tasks are completed and plans for project tasks evolve. The status of the project tasks is reported in the Project Status Report.
4. [Project Budget](#) (Planning Phase) — is used to identify and report all sources and uses of funds related to the project. The Project Budget is a financial map of expenditures for the project. It includes direct costs as well as the utilization of internal resources. The Project Budget should be updated throughout the course of the project with information about actual expenditures to complete tasks and deliverables. It should also be revised to reflect approved changes to project plans.
5. [Project Risk Plan](#) (Planning Phase) — is used to identify and address all risks related to the project. The Project Risk Plan is a map of all of the risks that may prevent project success, and the actions and expenditures required to overcome or reduce these risks. The Project Risk Plan should be updated throughout the course of the project as new risks are identified.

6. [Project Communications Plan](#) (Planning Phase) — describes how all of the project stakeholders will communicate with one another during the course of the project including the:
 - Project sponsors.
 - Project team members.
 - Project manager.
 - Members of the project's steering committee.
 - Future users of the system or service.

The Project Communications Plan describes the types of communication that will be conducted during the project including the purpose, mode, and frequency of each type of communication. The Project Communications plan also documents who is responsible for authoring each communication and who will receive it. The Project Communications Plan should be updated throughout the course of the project as practices to improve communication among the project stakeholders are established.

7. [Project Status Report](#) (Monitor and Control Phase) — is a tool for project managers to inform the project sponsor, project team members, and other project stakeholders about:
 - Project milestones that have been completed.
 - The status of project tasks.
 - Project risks that are emerging.

The Project Status Report keeps all of the project stakeholders informed so they will not be surprised by any project developments. The Project Communications Plan documents when project status reports should be issued.

8. [Project Acceptance Report](#) (Monitor and Control Phase) — is used to document that each project deliverable meets the acceptance criteria as specified in the Project Charter. The customer for each deliverable identified in the Project Charter must sign off when approving the acceptance of the deliverable.
9. [Project Change Request](#) (Monitor and Control Phase) — is used to request and obtain approval for project changes that impact the schedule, scope, or budget of the project as stated and approved in the Project Charter. The Project Change Request ensures that all proposed project changes are documented and go through a formal review process by the project steering committee that is responsible for approving or declining the requests.

10. [Project Closeout Report](#) (Closure Phase) — documents if a project is complete and successfully transitioned to operations. It also records how the project performed against the specified Success Measurement Metrics listed in the Project Charter. Finally, the document captures the lessons learned from the project so others can benefit from the project team's experience. When the Project Closeout Report is approved and signed by the project sponsor, the project is finished.

Templates for each of these documents, and instructions for filling them, out can be downloaded at <http://technology.berkeley.edu/cio/tpo/project/pmresources/tools/>.

Requesting Assistance from the OE

If you have any questions about the campus project management methodology or would like to consult with the campus OE PO, please send email to pm@berkeley.edu.