State of Colorado

STATEWIDE
PROJECT MANAGEMENT USER GROUP
(PMUG)

PMUG Project Management Common Methodology v1.0

March 2006

Statewide PMUG
PM Common Methodology v1.0

FRAMEWORK

Common Methodology Outline

Framework

- Common Methodology Outline *(Can be used as TOC if printing the methodology*)
- Common Methodology Framework
- Common Methodology Framework Overview (*2 pgs*)

Initiating

- Initiating Approach (*3 pgs*)
- Initiating Checklist
- Templates
    - Project Scaling Worksheet
    - Statement of Work (*May also be used as Project Charter*)
    - Risk Identification List
    - Human Resource Planning

Planning

- Planning Approach (4 pgs)
    - Work Break Structure Instructions (*5 pgs*)
    - Risk Management Issues (*3pgs*)
    - Risk Analysis Instructions (*2pgs*)
- Planning Checklist
- Templates
    - Project Plan (*11 pages*)
    - Project Budget
    - Project Schedule
    - Communications
        - Plan
        - Status Report (*2pgs*)
        - Meeting Agenda
    - Resource Plan (*Not a separate template. It is part of the project plan template*)
    - Risk Planning
        - Risk Evaluation Form
        - Risk Log
    - Quality Plan
    - Change Control
        - Project Change Request
        - Change Request Log
    - Procurement Plan

Executing/Controlling

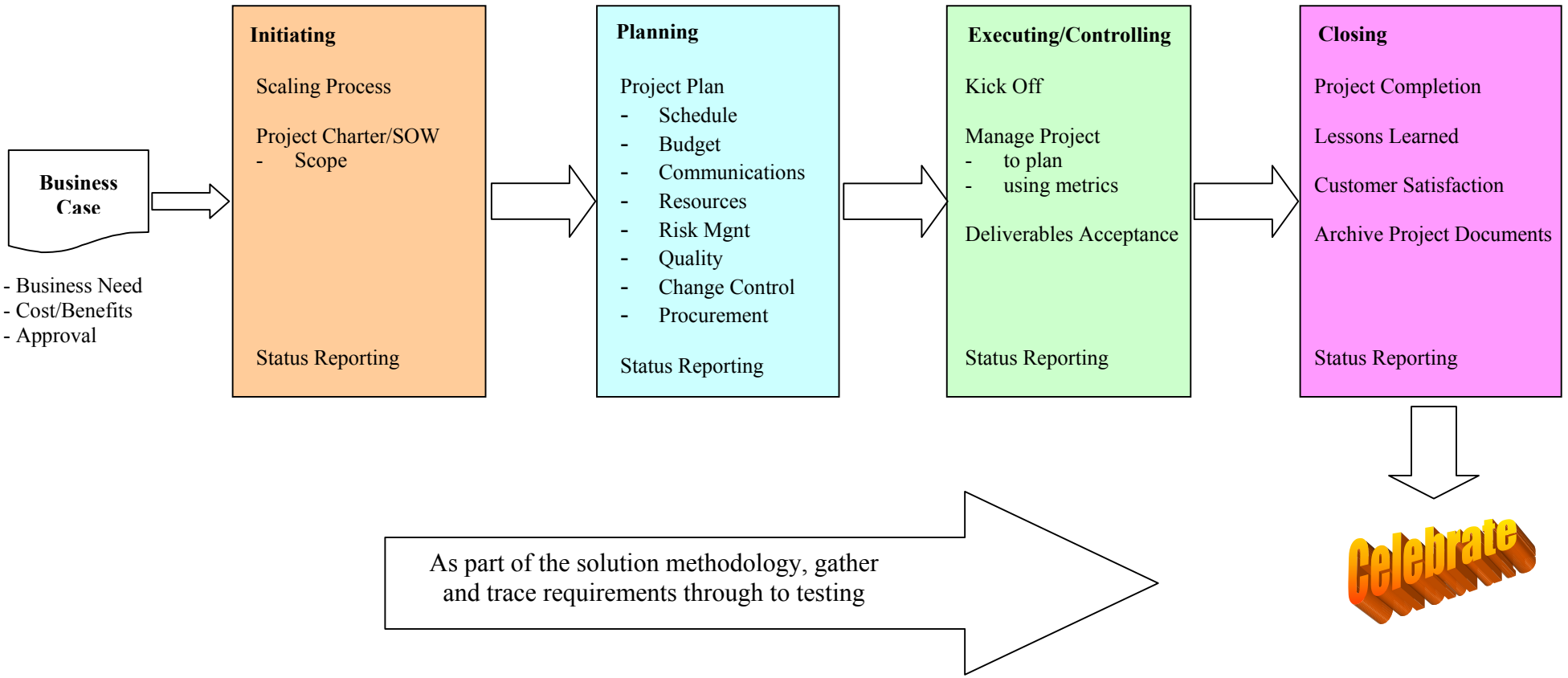
- Executing/Controlling Approach (*4 pgs*)
- Executing/Controlling Checklist
- Templates
    - Issues Log
    - Deliverable Acceptance

Closing

- Closing Approach (*2 pgs*)
- Closing Checklist
- Templates
    - Lessons Learned
    - Project Acceptance
    - Final Acceptance Notice

COMMON METHODOLOGY FRAMEWORK

This is a graphic representation of the methodology framework. It was developed using the approach of what are the minimum activities that are needed in each of the "phases."



Common Methodology Framework Overview

Purpose

The purpose of the Framework is to provide a holistic overview of the life of the project and each of the project management phases needed to successfully complete the project. Every project consists of four phases: Initiating, Planning, Executing/Controlling, and Closing. The amount of effort required for each phase will depend on the size and complexity of the project.

From beginning to end, there are several key elements required to successfully plan, execute, and complete a project. The Framework outlines at a glance the minimum essential project management elements for each phase.

Objective

The Common Methodology Framework version I is intended to cover the minimum and most basic elements of a solid project management plan. It's designed for agencies that have no project management methodology in place or for project manager's working on small to medium sized projects that need a set of templates to help manage the project.

The phases and elements outlined here are based on industry best practices. This is a living methodology and updates, additions, and enhancements will be forthcoming.

Phases

Initiating
Initiating is the beginning of the project. This is where the objective of the project is documented and initial requirements gathering begins.

Planning
Planning is where the project management plan is created, documented, and approved by the project sponsor and project stakeholders. The project plan will be used to guide the work of the project and to measure project progress.

Executing/Controlling
Executing/Controlling is where the work of the project is performed. Deliverables are completed, tested, and accepted. Deliverables are compared and verified against the project management plan and the requirements.

Closing
Closing is where lessons learned are documented, project documents are archived, contracts are closed out, and team members are released to work on other assignments.

Common Methodology Framework Overview

More detailed information can be found on these phases within the Common Methodology overview for each phase.

Solution Methodology

Along with the project phases, other elements are needed to make the project a success. For example, requirements gathering, documentation, and validation are generally the responsibility of the business analyst or business subject matter expert. The project manager assures these steps are completed but isn't necessarily the one responsible for performing these tasks. As early in the project as possible, the project manager should request a business analyst to work with them on the project.

Other solution methodologies that may be required for a project include: a System Development Life Cycle, contracting, requirements gathering, and industry specific methodologies for non-IT related projects.

Project Manager Responsibilities

The project manager is responsible for overseeing every phase of the project and ensuring milestones are met, stakeholders are satisfied, and project status and issues are communicated appropriately. The project manager should have direct oversight and hands on involvement with each of the elements within the phases of the Framework. Additionally, the project manager should make certain any solution methodologies needed for the project are followed and completed.

The project manager's number one role is communication. Project status, risk status, issues, action items, and so on should be communicated timely and to the appropriate parties.

Please note: All templates and checklists in this common methodology provide a "baseline" for project managers to build upon. These documents can be expanded or customized to best serve the needs of the project, project manager and/or state agency. Checklists provide a list of primary steps to be taken during that phase of the project and intended for project managers to enhance to best suit their needs.

Also, this methodology is separate from OIT requirements. It is a methodology based on project management best practices and it is provided to help agencies improve their project management.

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INITIATING

Initiating Approach

Common Methodology

Overview

Purpose	The purpose of project initiation is to "size" the project, to establish a common understanding of the scope, and get authorization to continue with the project.
Pre-Conditions	• "Business case" is approved.
Post-Conditions	• Project Charter has been approved • Move to Project Planning
Completed by	Project Manager
Necessary Participants	Key Stakeholders (Requestor, Sponsor, etc.), Project team (If in place)

Introduction

Initiating is the beginning of the project. It is in this phase that the project manager and the project team, if available, begin to understand what is to be accomplished with the project. The key deliverables from this phase are the scaling of the project, and the Project Charter/Statement of work.

One of your first tasks is to review and understand the approved "business case." Much information about the concept behind the project can be found in the document. This information will also be useful in completing other templates. The project manager must also identify the key stakeholders in the project. The project sponsor should be in place, but there may be other people who have information about the project that needs to be gathered to further understand the project.

Project Scaling

The purpose of scaling a project is to identify the "size" for a project. The size will determine the appropriate amount of effort for the project management deliverables. Thus, for a small project the scope may be one page long whereas for a large project it is multiple pages. This approach is necessary to allow for flexibility yet provide appropriate control. It also ensures that the project management processes are usable regardless of the size or complexity and provides the documentation that forms the basis of the project knowledge.

Project Charter/Statement of Work

The Project Charter/Statement of Work includes Background, Objectives, Scope, Key Deliverables, Project Authority, Management Approach, Initial Risk Assessment, and Initial Project Schedule.

Initiating Approach

Common Methodology

To gather the background and objectives, you will begin by gathering high-level requirements and defining your project scope. You'll do this by reviewing existing documents and talking to the identified key stakeholders. These discussions can cover their objectives and what the project is supposed to accomplish. Through these discussions the project scope is more clearly defined, and the input for the project charter/statement of work is gathered.

You must also consider Risk at this time. Take time to think about the risks that are facing this project. Use the Risk Identification List template as a place to start identifying those risks that may have a significant impact on the project. After identifying the risks, analyze and prioritize the risks according to those with the highest probability and or impact to the project. Include the list of risks in the appropriate section of the Project Charter/Statement of Work.

Putting the preliminary schedule together starts with developing a Work Breakdown Structure (WBS). Creating a WBS involves taking the identified work and "breaking it down" into its component parts. The completed WBS is the basis for estimating the effort involved with the project. The tasks identified in the WBS process also help identify the type of skills that are needed to accomplish the project. All the resulting information is used to create the preliminary project schedule.

Document the preliminary human resource needs for the project on the Human Resource planning template. Identify special skills and knowledge and experience levels needed for the project.

With all of the gathered information, complete the project charter/statement of work. Once complete, present the document to the project sponsor for approval. Once approved file it in the project repository.

Other Considerations

Depending on the size of the project, it may be necessary to seek funding. If that is the case, then a Decision Item (DI) must be created to get funding for the project. To provide information and documentation for the Decision Item, the high-level requirements, the scope, the needed skills for the project are identified and a preliminary plan developed. This information can then be used to fill out the various forms that make up the DI. **Please note**: The need to define the project clearly and as completely as possible becomes critical because of the time lag from the project definition to being able actually to start the project itself.

The same can be said for procurement. It may be necessary to create a Request for Proposal to acquire a vendor to help with the project Work with Procurement to do an RFP.

Initiating Approach

Common Methodology

Depending on the size of the project there are other things to consider. These include:

- If the project is $25,000 or over, then OIT will need to review and approve the project. Check with OIT for the specifics.
- There may inter-agency processes and procedures and approvals necessary, particularly around infrastructure.

Initiating Checklist
Common Methodology

INITATING STEPS

Project Management

_____ Review approved Business case
_____ Look for similar projects in enterprise repository, other agencies or states
_____ Identify key stakeholders
_____ Scale project using scaling worksheet
_____ Interview sponsor/other key stakeholders to understand:
- Objectives
- Scope
- Deliverables
- Anticipated duration
- Anticipated resources

_____ Compile list of initial project risks
_____ Complete Statement of Work template
_____ Complete funding documents (Decision item, supplemental), if necessary
_____ Complete procurement documents (RFP, RFI), if necessary
_____ Request approval from sponsor or other appropriate level of management
_____ File completed project charter/statement of work in project repository

Project Scaling Worksheet

Project Name

Project Aspect	Number
A) Criticality to business (Impact to business if project not successful) Minimal [Little impact on business]……..1 Moderate [Business would suffer loss in time, money, information, etc.]..…5 Major [Business would be severely impacted]……..10	
B) Number of end users (People who are impacted by project) Less than 25 end users…….1 25-250 end users……..3 Greater than 250 end users……..5	
C) Anticipated complexity of project Straight forward [No new technologies]……..1 Challenging [Significant changes to proven technologies]……..3 Difficult [New technologies, multiple old technologies]……5	
D) Projected costs (Includes all costs i.e., infrastructure, salary costs, customer costs) Less than $25,000……1 $25,000-$199,000……3 $200,000-$499,000……..5 $500,000 or above [Need Feasibility Study (ENE)]……..10	
E) Estimated duration Less than 3 months……..1 3-6 months……...3 6-12 months……5 Multi-year……..…10	
F) Stakeholder support Strong stakeholder/management support……1 Moderate stakeholder/management support……3 Limited stakeholder/management support……...5	
G) Anticipated project team size (Total number of people on project team, including customers, vendors, etc.) Less than 4 people……1 4-10 people……...3 Greater than 10 people……5	
H) Project team experience with project management, technology and/or applications Very familiar……....1 Somewhat familiar……...3 Limited or no experience……5	
I) Project team experience with the project's customers and their business Very familiar……1 Somewhat familiar……...3 Limited or no experience……5	
J) Number of Offices/Divisions/External stakeholders groups involved Less that 3……1 3-6……2 Greater than 6……...3	

Total of Aspects:	**10-21**	**22-34**	**35-48**	**49-63**
Project "Size"	Small	Medium	Large	Multi-year

State of Colorado

Statement of Work for
[Project Name]

Prepared by:	Your Name
Version:	Version Number
Document Id:	SOW medium.doc
Date:	Release Date

TABLE OF CONTENTS

REVISION CHART

Version	Primary Author(s)	Description of Version	Date Completed

General instructions in developing a statement of work from this template:

- *All instructions, tips and recommendations that you find within the template will be preceded by a bullet-arrow and italicized. Remove these when you are finalizing the template.*
- *Section entries must be brief and to the point.*
- *Name names as indicated. Name functions or titles as indicated.*
- *Spell-check before submitting for review and approval.*
- *Any subsequent revisions to the SOW and baselined project plan have to be tracked and approved via the Change Procedure described in the SOW.*

1. Background

- *Briefly describe relevant history that precedes the project.*
- *Briefly describe the purpose and the business drivers for the project or the problem or opportunity being addressed.*
- *Briefly describe this project's relationship to other initiatives or projects (e.g., dependencies, function of this project in relation to a bigger picture).*

2. Objectives

- *Given the historical background and drivers, state what the project must accomplish. This should be brief and high-level–-describe the final outcome that will address the problem or the opportunity described in the previous section.*
- *Objectives should be **S**pecific, **M**easurable, **A**ttainable, **R**ealistic, and **T**ime bound*

3. Scope

3.1 Inclusions

- *Provide specific details to ensure a complete and unambiguous understanding of the boundaries of the project.*
- *Define what is included using metrics whenever possible.*
- *Avoid a description of how work is to be performed.*
- *Useful questions: What business area is targeted? What function within the business area is included? Are the following included: conversion, training, interfaces, transition, maintenance and operations?*

3.2 Exclusions

- *This helps further define boundaries by clearly stating what is out of scope.*
- *Must be shorter than Inclusions.*

3.3 Constraints

- *Detail limits imposed on the project. This could include a completion date required by law or a fixed budget*

4. Key Project Deliverables

- *List all the major project deliverables.*
- *Determine acceptance criteria for the deliverables. If details are unknown at SOW time, specify when these criteria will be finalized and the medium (e.g. "A document outline and a description of the sections for document X will be provided during ActivityX-TaskX. This has to be approved prior to any work commencing on production of the deliverable," or "A layout of the report will be submitted for approval…," or "Coding standards will be drafted and approved …").*
- *Indicate who will review and sign-off for approval.*
- *State that the deliverable due dates are indicated in the attached preliminary project plan.*
- *Note that use of tables – rather than a narrative – to detail the deliverables is preferred.*
- *Example:*

Key Deliverable	***Acceptance Criteria***	***Approval By:***
System Documentation	*- Documentation is in standard format.* *- There are less than 10 spelling or grammar mistakes.*	*Customer Data Mgr.*

	- Flesch-Kincaid Reading level is less than 9th grade.	

5. Project Authority

5.1 Authorization

This Statement of Work has been initiated by *[initiating group]* and authorizes the use of organizational resources to accomplish the objectives of the project.

- *This section ensures that the project initiator has the authority to commit the appropriate resources within the organization.*

6. Project Resources

6.1 Project Manager

- *This section names the project manager and may define his or her role and responsibility over the project.*

6.2 Staffing

- *Describe the project's staffing requirements (FTEs, skills requirements).*
- *Describe how these requirements will be met (hire, outsource, draw from existing).*

6.3 Other Resources

- *Describe the resources needed by the project (Hardware, Software, supplies).*

7. Risk Identification

- *Define "risk" as anything that may have a negative impact to the project: schedule delay, increased costs, and poor quality of deliverables.*
- *Briefly describe how the project will practice risk management.*
- *An initial list of risks must be compiled and must accompany the SOW.*

8. Preliminary Schedule

- *Attach the preliminary Project Schedule.*

9. SOW Approvals

_____ _____

Project Sponsor Date Project Manager Date

_____

CIO (if needed) Date

Risk Identification List

Project Name

General Information

Prepared By: _____
Date Prepared: _____

Risk ID List

ID	Risk Description	Probability (H-M-L-N)	Impact (H-M-L-N)	Risk Score

*Risk Score is a combination of the probability of the event occurring and the impact the risk has to the project if it does occur. Score risk probability and impact with either a high, medium, low, or negligible, rating. Risk score is the combination of the scores, for example, high-high. See the instruction sheet for this template for definitions of these values.

Human Resources Planning

Project Name

General Information

Prepared By: _____

Date Prepared _____

Task ID	Task Description	Skills Needed to Complete Task	Experience Level and Criteria	Team Member Assignment (Potential)

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PLANNING

Planning Approach
Common Methodology

Overview

Purpose	The purpose of project planning is to develop the project plan that will guide the execution of the project and to get approval for the plan.
Pre-Conditions	• Project definition is complete. • Project has been approved to move forward.
Post-Conditions	• Acquire approval to project plan. • Move to Project Executing/Controlling
Completed by	Project Manager
Necessary Participants	Project Team, Key Stakeholders (Requestor, Sponsor, etc.)

Introduction

The planning phase is where the project plan, i.e. the "roadmap" is developed for the project. The key deliverable is the project plan itself. The plan lays out the scope, the schedule, the budget, and the process that will be used to manage the project.

Once complete, the plan needs to be shared with the key stakeholders so they understand how the project will be executed as well as provide input into the plan. The last task is acquiring approval of the plan from the project sponsor and/or executive management.

Project Plan

The Plan itself is the compilation of all of the planning efforts for the project. It includes the following components:

- Budget
- Schedule
- Communications Planning
- Change Control Planning
- Risk Planning
- Quality Planning
- Procurement Planning

The planning for each of these areas needs to be completed and the results inserted in the project plan or added to the plan as appendices.

Planning Approach
Common Methodology

Project Schedule
Using the information from the Initiating phase, the preliminary project schedule can be expanded and completed. Use a scheduling tool like MS Project (for larger projects) or MS Excel (for smaller projects) to make the planning effort and the subsequent tracking of progress easier. Start with reviewing the Work Breakdown Structure (WBS) that was created in project definition. Make sure that the WBS covers all activities that are needed to complete the project. See Work Breakdown Structure Instructions Ask a peer to review the WBS for any improvements. Add any resulting changes, and then finalize the schedule with the tasks from the WBS, all resources needed, and estimated effort for each.

Project Budget
The project budget identifies all expected expenditures for the project. It is important to understand what is being spent to complete a project. By understanding the project costs, decisions can be made relative to the benefits the project brings to the organization. The project manager normally constructs a project budget. The project budget will detail the total cost of the project and when they will occur. The budget includes:

- All salary costs, both FTE and contractor
- Any software costs and when they will occur
- Any hardware costs and when they will occur
- Any other project cost (for infrastructure, supplies, travel, etc)

Applying the cost of labor to the resources identified and adding other costs for infrastructure or hardware/software builds the budget. Depending on the size of the project, the budget could be an MS Excel spreadsheet or a more involved system for tracking costs for large projects.

Resource Planning
The staffing of a project is dependent upon the needed skills that were identified in the Initiation phase. In Planning, those skills are matched to the people who have them. Depending on the staff currently available, the resources may come from a specific area in the organization, from the customer staff, or hired from the outside. It is in the resource planning process that the project organization is decided upon and roles and responsibilities are detailed and assigned. Clearly defining roles will allow all the people to understand what they are responsible for and to identify any gaps that need to be filled. Also, think about how to help the project team in their efforts as well as how to reward them, if they do a good job.

Please note: If the staff assigned to the project does not have the skills or level of skills required, then appropriate training should be considered. If training is not possible then the estimates for the tasks assigned to the role should be adjusted for that resource.

Communications Plan

Communication is a major area of effort for the project manager and is critical to a project. Talk with all key stakeholders identified in project definition and agree on what information they need, when they need it and in what format. Use this information to create a basic communications plan. The plan will be used to guide the communications through the life of the project. Review the communications plan with the key stakeholders and include it with the project plan.

Keep in mind that there are different kinds of communications. Formal communications include the project status report. The status report informs the stakeholders of key areas to be discussed and addressed. At a minimum, the status should be done every two weeks to keep the stakeholders informed.

Informal communications are equally important and involve the project manager taking the "pulse" of the project by informally talking to both the team members and stakeholders to make sure that things are going according to plan. Communications are an on-going effort throughout the life of the project.

Risk Planning

As projects grow in scope and duration, so does the risk. The farther into the future the project execution goes, the more time for unforeseen circumstances to impact the project. The person managing the project must consider the risks that can significantly impact the project. Risks in all areas should be reviewed and documented, and plans to mitigate the significant risks should be developed. See Risk Management Issues

Risk management started in prior phase. An initial list of project risks was developed to start the process of understanding the risk inherent to the project. Now, during project planning, the risks are analyzed to see which risks need attention based on the likelihood of their happening (probability of occurrence) and what would happen to the business if the risk happened (severity of impact). See Risk Analysis Instructions Once the risks are analyzed and prioritized based on their probability and impact, the significant ones need to have response plans developed for each of them. Finally, the risks are also considered as the project schedule is finalized.

Quality Planning

Quality is important! With all projects, there needs to be focused attention on the quality aspects. This attention starts with the person managing the project identifying and understanding any quality standards that exist and need to be taken into consideration. These standards help define what types of quality procedures are included in the project. The quality procedures could include things like design reviews, technical walk-throughs or specific testing. Once identified, this information is compiled into a quality plan. Part of the quality plan is also identifying the resources that will be used to ensure that a quality product is delivered.

Testing is probably the most important process. On large projects, testing may be done by a separate group of people. The testers work on developing test plans and the test environment. The customer should also test to ensure that the deliverable is what the customer requested and is working correctly. All of the testing that is planned must be included in the project schedule to ensure that it is accomplished.

Change Control Planning

As systems become bigger or more requirements are identified, there is a greater chance that things will change over time. Because of this, the process to recognize and handle those changes needs to be formalized. The project manager must establish a change control process for the project. That process must be reviewed with the stakeholders so everyone understands how changes are handled and allows buy-in to the process. With a larger sized project, changes can be accepted and made a part of the project, rejected or deferred. The deferred changes are normally addressed in another phase or project.

Procurement Planning

Larger projects often have a variety of items, like hardware, software or supplies that are purchased to support the project effort. During project initiating some, if not all, of those items are identified. Then during project planning those items are finalized along with associated information in a procurement list. Also needed is an understanding of the process for buying them and the time it takes to have them available. The completed list is then used as a basis for actually buying the items. Using this information, the person managing the project can also put milestones in the project schedule that will assist in the monitoring of those purchases.

Other Considerations

When planning a project, one thing to consider is how the project will impact the organization. Will people need to change the way they do their job? If so, then part of the project plan should be to help the people understand and make the change. That means that tasks like, training, communications to end users and sponsor presentations need to be part of the project activities.

As the project management effort is underway, the efforts around the "solution methodology" may be happening at the same time. For example, during planning, the gathering and documenting of requirements may happen at the same time. There may be other work that can be happening concurrently with planning to help prepare for executing the project. But, be careful, while some preparation can be done, the project plan must be complete before moving forward.

Work Breakdown Structure Instructions

Work breakdown structures (WBS) are used to define and breakdown all of the work of the project into logical groupings. Work that is not included on the WBS is not considered work of the project. Therefore, all project work must be represented on the WBS.

A WBS is constructed in hierarchical form, much like an organizational chart, with the project itself at the top. Each level of the WBS represents a further breakdown of the work of the project. For example, level one is the project itself, level two might contain all the deliverables for the project, level three is a further breakdown of those deliverables and level four is the actual task or activity to be performed in order to complete the deliverable.

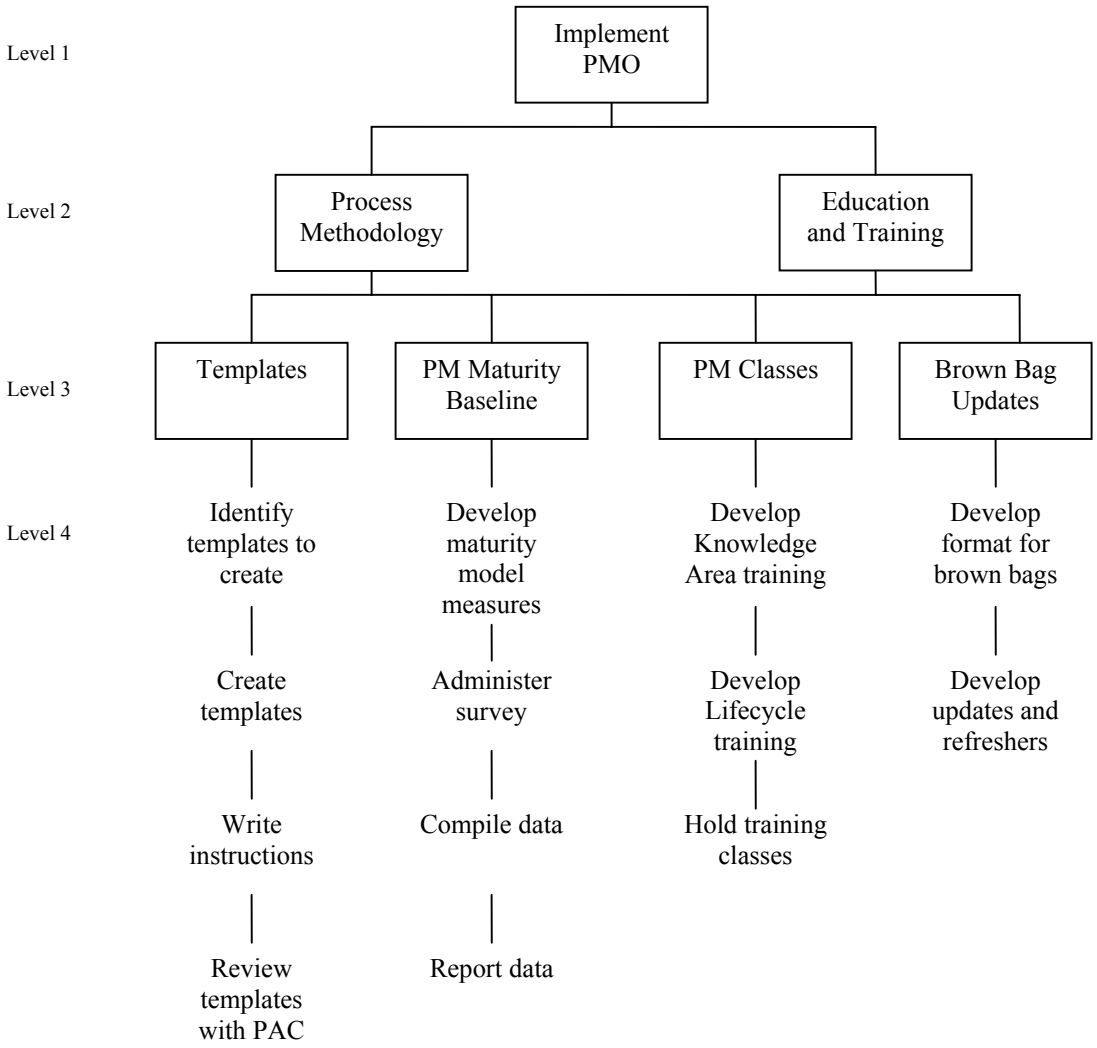
The first step in developing a WBS is to identify all the project deliverables. Hopefully, these are listed in the Scope Statement so you won't have far to look. Next, begin breaking the deliverables down into smaller deliverables as shown in the examples below and finally into tasks. You know you're done when you've identified all the tasks it will take to complete the deliverable.

Don't try to go it alone when creating your WBS, enlist the help of the project team. Use brainstorming methods to help identify all the tasks needed for each deliverable. One person cannot think of all the tasks needed for a project, except for the smallest of projects, so involve your project team in the identification process. List the deliverables on a white board, one by one, and identify all tasks for each of the deliverables until no one can think of anything more.

Figure 1 (on the next page) shows a sample portion of the WBS for the Implement PMO project. You can see how the levels are broken down into finer levels of detail or activity at each subsequent level of the WBS.

Work Breakdown Structure Instructions

Figure 1 – Sample WBS



There are no hard and fast rules for how many levels the WBS should have. However they tend to get unwieldy when they exceed five or six levels.

The higher levels of the WBS depict deliverables which are usually described as nouns (person, place or thing). The lower levels and particularly the lowest level, are usually activity based and are described using verbs (action words).

Work Breakdown Structure Instructions

Large projects generally have a WBS that is only two or three levels deep. Level one is the main project, level two is sub-projects under the main project, level three is either further sub-projects or a listing of deliverables. Each sub-project manager is then responsible for developing their own WBS for their sub-project.

The lowest level in any WBS, no matter how many levels there are, is called the work package level. A work package is the level where estimates can be made and resources assigned. This might be the task level for small projects, or the sub-project level for large projects. Always breakdown your WBS to the level where estimates can be easily determined and resources can be assigned.

WBS may also take on an outline form. Figure 2 shows the same information from Figure 1 in outline form. Either form is acceptable to use.

Figure 2 – Outline WBS

1 Implement PMO

10 PM Process Methodology

10.1 Establish Baseline
- 10.1.1 Develop maturity model measures
- 10.1.2 Administer survey
- 10.1.3 Compile data
- 10.1.4 Report data

10.2 Develop Templates
- 10.2.1 Identify templates to create
- 10.2.2 Create templates
- 10.2.3 Write instructions
- 10.2.4 Review templates with PAC

20 PM Education and Training

20.1 Two Day Overview Class
- 20.1.1 Develop training on PMI nine Knowledge Areas
- 20.1.2 Develop training on five lifecycle processes
- 20.1.3 Conduct training

20.2 Brown Bag Updates
- 20.2.1 Develop format for brown bag reviews
- 20.2.2 Develop training for refresher courses

Work Breakdown Structure Instructions

You'll notice that the WBS in outline form uses a series of numbers to identify every item on the WBS. Using a numbering system, especially for a large project, is helpful to uniquely identify all the deliverables and tasks of the project. I recommend using a numbering system for your WBS no matter which method you choose the display the WBS. In figure 1, you could place the numbers in the top left hand corner of each box in a smaller font than the text.

The numbering system is also used in the WBS Dictionary. As you can probably guess the WBS Dictionary is used to describe the deliverables and tasks in more detail. The WBS Dictionary should be written at the same time the WBS is being constructed so clear definitions exist of the deliverables and tasks. Someone not as familiar with the project as you are can easily see what each item in the WBS entails when they look up the item in the dictionary.

Use the numbers and the deliverable/task name in the dictionary to identify the WBS element as they're shown on the WBS. Use your judgment in determining which elements need defined in the dictionary. Remember your readers will be the project sponsor and stakeholders so be certain to write the definitions according to their level of understanding whenever possible. You and project team may know what your deliverables mean but your stakeholders may not. Write the WBS with them in mind. A sample portion of the WBS Dictionary for this project is shown below.

Figure 3 – WBS Dictionary

WBS Dictionary

10 PM Process Methodology

Standards and methodologies for project management based on the Project Management Institute's (PMI) guidelines.

10.1.1 Develop maturity model measures

A maturity model depicts the level the organization is at in terms of project management knowledge and usage. This maturity model will be based on PMI's nine Knowledge Areas.

20.1.2 Develop training on five lifecycle processes

The five lifecycle processes of all projects are: Initiation, Planning, Executing, Controlling, and Closing. Training will be developed to instruct others on the elements, templates, and methodologies for each of these processes.

The WBS helps you identify all the work of the project. Any work not included on the WBS is not part of the project. The WBS does not show dependencies, only a

listing of deliverables and their sub-deliverables and tasks when appropriate. After completing the WBS, you can easily construct a network diagram and or a project schedule where you can show the dependencies between the tasks because all the work of the project has been identified.

After the WBS has been documented, have your project sponsor and key stakeholders review (and approve if appropriate) it. After approval is obtained, begin building your project schedule.

Risk Management Issues

Scope and Requirements Definition

1. Are the project objectives clearly identified and defined?
2. Is the project scope complete and defined in detail?
3. Does the scope document include performance requirements?
4. Can the estimates for time and cost be validated with historical information?
5. Is the project completion criteria well understood and clearly defined in the scope document?
6. Does the project have a fixed completion date with no contingencies?
7. Have project funds been fully budgeted and allocated?
8. Can the project be justified in business terms?
9. Does the project have the support of senior management?
10. Is the project critical to the business of the enterprise?

System Complexity

1. Is there a standardized development methodology?
2. What is the expected operational life of the new system?
3. Is there current documentation for the existing system?
4. Is there an available system prototype or model that can be used for training and usability testing?
5. What is the availability of required additional hardware resources?
6. Does the system have logical (user driven) complexity as measured by:

    - Logical input types
    - Logical output types
    - Logical user views of data
    - Automated transfer of input/output files to another system
    - Logical query types

        1. Is data element editing a complex process?
        2. How much data will be transferred into the new system from old systems?
        3. What is the quality of the data to be transferred from old systems?
        4. What is the required number of interfaces to existing systems for the new software/system being developed?
        5. Are the quality requirements been fully documented and understood?

6. Is there a quality assurance function that will monitor the system development and outcome?

User Environment Issues

1. Is the user committed to the change control process?
2. Is senior user management committed to the system changes?
3. What priority does this project have within the user area?
4. Will the system be critical to users continuing operations when the project is completed?
5. What is the number of outside organizations involved in approvals and other decisions regarding the system?
6. How many different user areas are involved in confirmation, approvals, and other system decisions? How many different user areas and sub-areas?
7. How many user sites and installations are involved in the system implementation?
8. How severe are the procedural changes/disruptions caused by the proposed system in user departments?
9. How will the user organization change structurally to accommodate the new system changes?
10. How stable are the system requirements?
11. What is the status of the current system documentation?
12. What percent if present functions will be replaced one-to-one?
13. Are the project deadlines:
    - Flexible –established in conjunction with the project team
    - Firm – established internally, but missed dates may impact user functions/operations
    - Fixed – established by specific operations, legal requirements, direction beyond organization control

    At what level will users participate in the design and development process?
    - Fully committed – expert users are allocated to undertake a significant amount of project work
    - Significant responsibilities – less than full-time commitment
    - Some responsibilities – limited to review and approvals
14. Is the user representative knowledgeable in the proposed application area?
15. Is the user representative knowledgeable in information systems development?
16. Rate the communications between the user area and information systems on a scale of 1 to 5, with 1 being low and 5 being high.

17. Are new user-controlled technologies required for the successful use of the new system?
18. Is the project dependent on government legislation or regulations, vendors or outside consultants to meet its deadline?

Team Environment Issues

1. Will a standard project management methodology be followed throughout the life of project?
2. Is the project priority in the Information Systems function high or low?
3. Is senior IS management committed to the success of the project?
4. What is the project team size, including full-time user professionals?
5. What are the total development person hours for the project?
6. What is the estimated project development time?
7. What is the project manager's availability for the project, experience, and training in project management?
8. Can key project skills and staffing level requirements be met within the scope, cost, and timeframes for the project?
9. What is the number of project team members who have worked successfully together on previous projects?
10. Are members of the IS project team knowledgeable in:
    - The proposed application area
    - The programming languages to be used
    - The database system used
    - The data communications system used
    - The software packages used
    - The hardware used
11. Is a new operations system installation required for the project?
12. Does the project require co-ordination with outside vendors and contractors?
13. Have additional resource costs been included in the project budget (travel, per diem, lodging)?

Risk Analysis Instructions

Risk Analysis

The Risk ID list consists of a table with three columns. A description of each column follows.

ID – Assign each risk a unique number for tracking purposes.

Risk – List the identified risk in this column. Risks identification should occur in a group setting with appropriate stakeholders and project team members present. Use brainstorming techniques (or some other method such as Delphi, Nominal Group technique and so on) to list all the risks that could occur on the project. See the, "Risk Management Issues" document to help the group get started identifying risks. Also review the project goals, objectives, constraints, assumptions, and scope statement for further help. Interview stakeholders, project team members, and check lessons learned documents from previous projects for help with this activity.

Probability – Probability describes the likelihood that the risk event will occur. Assign the probability score a value of H-M-L-N according to the table below.

Score	Description	Definition
High	Frequent	Will occur frequently
Medium	Probable	Will occur several times
Low	Occasional	Will occur sometimes
Negligible	Remote	Unlikely but possible

Impact – Impact is the potential for harm to the project if the risk event occurs. Assign the impact score a value of 1-4 according to the table below.

Score	Description	Definition
High	Catastrophic	A failure that will cause loss to the business unit, inability to complete a major deliverable, data corruption, system crash, or loss of a major project/system component.
Medium	Critical	A failure that will cause loss of a business function, loss of data, or severely delay the completion of a major deliverable.
Low	Marginal	A failure that will cause loss of an auxiliary business function, cause minor delays to the completion of deliverables, minor impacts to system performance,

		or negatively impacts usability of the end product or service of the project.
Negligible	Negligible	No failures likely but affects maybe cumbersome to the user.

Risk Score – Risk score is a combination of two factors, impact and probability. Taking both of these factors into consideration, rate each risk as a combination of the impact and probability score. An example is shown below:

ID	Risk Description	Probability (H-M-L-N)	Impact (H-M-L-N)	Risk Score
1	Insufficient budget	H	H	H-H
2	Loss of key personnel	L	H	L-H
3	Vendor delays	L	N	L-N

When all the risk scores have been assigned, prioritize the risk list according to their risk scores, starting with the H-H scores first.

The team should determine which risks need response plans. It's recommended that all risks with scores of H-H or H-M should have a risk plan. Additionally, any risk with a high impact should also have a response plan.

Planning Checklist
Common Methodology

PLANNING STEPS

Project Management

_____ Review information and documents from Initiating phase
_____ Expand preliminary project schedule
- Identify all activities and tasks

_____ Develop project budget
_____ Develop Resource Management Plan
- Roles and Responsibilities
- Project Organization
- Assign people

_____ Develop Communications Plan
- Talk to key stakeholders and gather
  - What information they want
  - When they want it
  - What format
  - How delivered

_____ Develop Risk Plan
- Analyze Risks
- Develop response plans

_____ Develop Quality Plan
- Identify quality standards
- Identify tasks and resources

_____ Develop Change Control Process
_____ Develop Procurement Plan, if needed
_____ Compile Project Plan
_____ Review Project Plan with sponsor and key stakeholders
_____ Request approval from sponsor or other appropriate level of management
_____ File completed project plan in project repository or publish to stakeholders.

Solution Methodology

_____ Gather requirements
_____ Understand environment

PROJECT PLAN: *PROJECT NAME*

VERSION: 1.0

DATE:

AUTHOR:

REVISION CHART

Version	Primary Author(s)	Description of Version	Date Completed
Initial –		This is the original project plan developed.	

CONTENTS

1. PROJECT DESCRIPTION

1.1 Project Overview

Project Name	*Project name*
Project Sponsor	*Name of project sponsor*
Requestor/Customer	*Name of person requesting project*
Proposed Manager	*Name of project manager*
Projected Dates	

1.1.1 Background

- *Briefly describe the current environment and any background information that will help understand the project.*

1.2 Project Scope

1.2.1 Objective(s)

The objectives of this project are:

-

1.2.2 Description of Scope

- *Describe the boundaries of this project. What is included in this project? Useful questions: What business area is targeted? What function within the business area is included? Are the following included: conversion, training, interfaces, transition, maintenance and operations?*

1.2.2.1 Exclusions from Scope

- *Describe what is NOT included in this project.*

1.2.3 Project Major Activities (For detail schedule see Section 5.1.)

The project involves the following major activities:

1.

1.2.4 Project Major Deliverables

Listed below are the planned deliverables and the acceptance criteria for each deliverable.

- *Determine the acceptance criteria for the deliverables. If details are unknown at plan time, specify when these criteria will be finalized and the form they will take.*
- *Example:*

Key Deliverable	***Acceptance Criteria***	***Approval By:***
System Documentation	*- Documentation is in standard format.* *- There are less than 10 spelling or grammar mistakes.* *- Flesch-Kincaid Reading level is less than 9th grade.*	*Customer Data Mgr.*

1.3 Budget

-

1.4 Other Related Projects

2. RESOURCE MANGEMENT

2.1 Staffing Plan/Project Team (Organization Chart)

•

2.2 Project Roles and Responsibilities

Add or delete roles as necessary for this project.

Responsibility	Persons responsible
Project Sponsor/Customer Contact	
Project Manager	
Programmers – Technical Staff	
Quality Assurance Manager	
Documentation Manager	
Requirements Development	
Testing	
Project Plan Signoff	
Project Acceptance	

3. PROJECT MANAGEMENT PROCESSES

This section describes the process that will be used to control the execution of the project by the project team.

3.1 Project Communications

- *Identify the key stakeholder(s) of the project. Include not only the key customers but also the other groups that may be impacted. Describe what information they will get, when they will get it, and how they will get it during this project. Use the Communication Plan template for medium projects. Attach it in the appendices, or insert it in this section when complete.*

3.2 Quality Management

- *Describe what steps will be taken to ensure the quality of the deliverables. Use the quality plan template and reference it here*

3.3 Change Control Process

- Changes to this project will be requested using the Change Request form (See Section 5.3).
- The Project Manager, or designee, will do an analysis of the request to determine the impact of the change on the current project. The results of the analysis will be discussed with the sponsor or its designee. At that point, the change will be approved, rejected or deferred by the customer and ITS. The customer who will approve the change requests is [*person's name*].
- If the change is approved, the plan will be updated, and the effort will become part of the project.

3.4 Risk Management

Known project risks are as follows:

- *Describe what the top 10 risks to the successful completion of the project are, and identify what actions will be taken to minimize those risks. Attach Risk Evaluation Forms, if used.*

3.5 Procurement

- *Describe what the needs to be acquired for the project. Use the Procurement plan or list the items here with the quantity, date needed and lead time to acquire.*

3.6 Deliverable Acceptance

- *The focus of this section is to define the process for submitting, approving and rejecting deliverables.*

4. PROJECT PLAN SIGN OFF

Signing below indicates approval of the project plan for [*project name*].

_____	_____
Project Sponsor	Date
_____	_____
Project Manager	Date

5. APPENDICES

5.1 Project Schedule:

Insert project schedule here.

5.2 Definitions and Acronyms:

Project Team – Includes the assigned staff, and other resources that may be deemed necessary and are assigned to work together on this project.

For example:
CMS – Centers for Medicare and Medicaid Services

5.3 Change Request Form

Insert change request form here.

5.4 Project Status Report

Insert status report from here.

Project Budget
Project Name

Budget Information

Phase/Process/Task	Resources (FTE, contractors)	Equipment / Materials (Hw / Sw)	Travel Cost	Other Cost	Total Cost per Activity	Planned Date of Expenditure

Project Schedule
Project Name

Project Schedule Information

Phase	Process	Task	Estimated Hours	Dependent Upon	Role

Communications Plan

Project Name

Prepared By: _____
Date Prepared: _____

EXAMPLE

Communication	Stakeholder(s)	Delivery Method	Frequency	Person Responsible
Detailed Status Reports	Project Manager	E-mailed to stakeholder	Weekly	Team Leads
Status Reports	Sponsor Managers Steering Committee	In Meeting	Monthly	Project Manager

Project Status Report

Project Name

General Information

Prepared By: _____
Date Prepared: _____
Current Project Phase: _____
Reporting Period: _____

Overall Project Status

% Complete Status R/Y/G

Project Accomplishments this Period

Deliverable % Complete Status R/Y/G

Scheduled and Actual Completion Dates

Deliverable Due Date Actual Date Status R/Y/G

Progress Expected this Reporting Period Not Completed

Deliverable % Complete Status R/Y/G

Progress Expected Next Reporting Period

Issues

Action Log

ID	Date Reported	Action Item	Owner	Date Resolved

Project Status Report

Project Name

Resolved Action Log

ID	Date Reported	Action Item	Owner	Date Resolved

Meeting Agenda
Project Name

General Information

Prepared by: _____
Date Prepared: _____

Date and Location of Meeting

Participants **Present Y/N**

Discussion Topics

1. **Introductions**
2. **Readout of previous meeting minutes**

Action Item Readout/Review

ID	Date Reported	Action Item	Owner	Date Resolved

Notes or Comments (location of additional meeting materials)

Risk Evaluation Form

Project Name

Risk Number: _____
Identified By: _____
Date Identified: _____

Brief Description of Risk

Evaluation of Risk

Probability of Occurrence

_____ Likely (90% chance or higher)
_____ Possible (50% to 90%)
_____ Unlikely (50% or below)

Severity of Impact

_____ High (business interrupted, time/money lost)
_____ Medium (business operates, time/money spent)
_____ Low (business as usual, minor inconvenience)

Risk Response (What will be done to mitigate this risk? Describe potential contingency plans or specific actions needed to reduce or take advantage of the risk.)

Assigned To:

Outcome of Response Plan or Mitigation Strategy

Risk Log

#	Date Opened	Opened By	Description of Risk	Status	Probability	Impact	Priority	Mitigation Strategy	Assigned To	Trigger Event	Resolution Strategy	Closed By	Date Closed

LEGEND

Probability Factors

Highly Likely = Factor of 10 (near 100% probability)
Average = Factor of 5 (50% probability)
Highly Unlikely = Factor of 1 (only 10% probability)

Impact Factors

Critical (4) = More than 1 month schedule slippage / > 10% budget increase / project failure
High (3) = 1 month schedule slippage / less than 10% budget increase / performance results less than 80% of goal
Medium (2) = 2 week schedule slippage / less than 5% budget increase / performance results are less than 90% of goal
Low (1) = 1 week schedule slippage / less than 1% budget increase / performance results are greater than 90% of goal

Status Types

Open
Approved
Closed

Quality Plan
Project Name

Prepared By: _____
Date Prepared: _____

Quality Standards, Policies, and Regulations

List any quality standards and regulations that apply to this project.

Quality Assurance Procedures

Describe what steps will be taken to ensure the quality of the deliverables. These match with tasks in project plan.

Quality Roles and Responsibilities

Identify the person or people who are involved with the project's quality efforts. Also note their responsibilities.

Project Change Request

Project Name

Requested By: _____
Request Date: _____
Change Request Number: _____

Description of Change

Expected Benefits/Why the Change is Needed/Business Justification for Change

Requested Implementation Date

Impact if Change is Not Made

Alternatives to Suggested Change

Impact on Project

Actual time to complete change: _____ (expressed in work days)
Effect on project schedule: _____ (expressed in days)
Time required completing analysis of Change Request _____

Approvals

☐ Approved ☐ Rejected ☐ Deferred

Date: _____ Customer: _____

Date: _____ ITS: _____

Change Control Board Comments Regarding Disposition

Change Request Log

Project Name

Req #	Change Description	Priority (H/M/L)	Date Reported	Requested By	Assigned To	Date Resolved	Status	Resolution/Comments
1								
2								
3								

Procurement Plan

Project Name

Use this form to list the items that will need to be acquired for the project. Think in terms of getting any kind of resources including: equipment, external personnel, and operating supplies. Use this information to build milestones into the project schedule.

Project Staff *(state staff, contractors, partners, other groups, etc.)*

Description of Skill or Resources Needed	Number	When Needed	Lead Time	Cost

Infrastructure (*Hardware, software, network, PCs, etc.)*

Description of Resource	Number	When Needed	Lead Time	Cost

Project Support (*furniture, office space, supplies, etc.)*

Description of Resource	Number	When Needed	Lead Time	Cost

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EXECUTING / CONTROLLING

Executing/Controlling Approach
Common Methodology

Overview

Purpose	The purpose of executing /controlling phase is to create the deliverables that were defined using the plan developed in the planning phase in a controlled manner.
Pre-Conditions	• Project plan is complete • Project has been approved to move forward.
Post-Conditions	• All deliverables completed and provided to customer • Move to Project closing
Completed by	Project Manager
Necessary Participants	Project Team, Key Stakeholders (Requestor, Sponsor, etc.)

Introduction

The Executing/Controlling phase is where the deliverables are created by following the project plan. The key deliverable is this phase is the "product" that the project is supposed to create.

Kick Off Meeting

In order to ensure that all team members have the same understanding and expectations regarding the project, a kickoff meeting is held. This meeting allows for communicating all relevant information about the project and ensures that all members understand their roles and responsibilities relating to the project.

For complex projects, a kickoff meeting may break off into several sub-meetings, in order to articulate better specifics of the project; however, the initial kickoff meeting should be kept at a high level to achieve consensus from all key stakeholders. Normally, a kickoff meeting is held at the end of the planning phase as the project moves into the Executing/Controlling phase.

Execute the Project Plan

After the work of planning the project and acquiring approval of the plan comes the work of executing the plan and creating the deliverables. Executing is when the project manager:

- Manages the execution of the project plan and tracks actual effort to plan
- Controls changes to the project
- Monitors risks, issues and quality
- Communicates the results of all the efforts

During executing, changes should be going through an established process, as should risks and issues. Quality efforts must be measured against the quality plan. All the activities, including comparing estimates to actuals as describe below, need to be reported through the communication process.

Tracking actual effort entails collecting the information to support the comparison to planned efforts and noting any resulting variances. Project scheduling tools like Microsoft Project support this effort, but they require data entry of actual time information. If there are variances then the project manager needs to understand why the variances exists and decide what can be do to bring the project back on track. The same type of effort needs to be done for the budget. Track the actual expenses for the project and compare them to the planned budget.

As the saying goes: *Bad news is bad news, but bad news early is good.* Communicating schedule/budget variances as they are identified enables others (e.g., project sponsors or department management) to help with the mitigation plan and/or prepare for the probable (a delay in the project schedule). Do not escalate all variances before they have been analyzed for the root cause and potential corrective actions considered. Conversely, do not try to hide significant variances with hopes that they will take care of themselves.

Managing Resources

To achieve key milestones and produce project deliverables takes everyone working together as a team. The project manager needs to think about how to help the project team in their efforts. This could include removing barriers that slow the team's progress, answering questions, or possibly helping them complete a task. The project manager should also consider activities to improve morale of the team, particularly when there is a lot of stress on the team. One example would be bringing in dinner when the team has to work into the night on a particular task.

The project manager also should consider how to reward the team/team member if they do a good job. Examples of recognition include written statements for performance appraisals, specific project mementos, or department awards. The publication of an appropriate article in a department newsletter is another possible action.

Communications

In Planning, the communications to the various stakeholders were identified and documented. During Executing/Controlling those communications are performed. Use the status report template for formal status reporting. Communications are an on-going effort throughout the life of the project.

Risk Management

Periodically, at least once a month, sit down with the project team and review the project risks. During the review, determine if all of the risks are still present or if new ones have occurred. If new risks are identified, document the risk on a risk form and complete the evaluation.

If an identified risk does occur, implement the response plan that was identified in the risk planning process. Communicate to the stakeholders that the risk has arisen and the planned measures are being taken to address it. This communication can be in the next status report or sooner if the impact is high. As the response is applied, keep the stakeholders informed of the impact to the project and any changes that may arise due to the risk.

Issue Management

During the execution of the project, issue will arise that need to be resolved. These issues may be as simple as answering a question about a workflow or as complex as dealing with a policy question that affects the organization. Regardless, all issues need to be tracked to resolution with some type of log.

If an issue can't be resolved in a reasonable timeframe or it can't be handled by the project team, then it should be escalated to the appropriate level of management to assist with the resolution.

Quality Assurance

As the project is executing, periodically verify that the deliverables are meeting the quality that was initially identified. This could include spot-checking the deliverables, reviewing the quality tasks or reviewing test results.

Testing is probably the most important process. On large projects, testing may be done by a separate group of people. The testers work on developing test plans and the test environment. The customer should also test to ensure that the deliverable is what the customer requested and is working correctly. All of the testing that is planned must be included in the project schedule to ensure that is accomplished.

Change Control

As changes are requested during the project, it is important that the process identified in Planning is used to track those changes. To avoid "scoop creep" all changes must go through the process. A part of the process is to analyze the impact of the requested change to the current effort. The impact is documented on the change request form. Once the analysis is complete, the project sponsor or other assigned persons can then make a decision about what to do with the changes. The decision normally includes that the change can be accepted and made a part of the project, rejected or deferred. The approved changes will be incorporated into the project and the plan will be updated with

them. The deferred changes are then addressed in another phase or project. A summary of the change activity should be included in the status report.

Deliverable Acceptance

When a project deliverable is completed and delivered, the person that receives it should acknowledge that this deliverable was received and it is acceptable. This process could be as easy as an electronic signature on the deliverables acceptance form from the sponsor or it could be physically signing the deliverables acceptance form.

Other Considerations

Continue to be aware of how the project will impact the organization. Monitor the tasks around organizational change management, identified in Planning, to help the organization accept the results of the project. Gauge if more or less efforts are needed to have the organization ready for the results of the project.

The efforts around the "solution methodology" are also in full swing in this phase. The Project Manager's job is to see that tasks are moving forward and that issues are being resolved.

Executing/Controlling Checklist
Common Methodology

EXECUTING/CONTROLLING STEPS

Project Management

_____ Hold Kick off meeting
_____ Execute Project plan
- Communicate Status
- Periodically monitor risks
- Use Change Control Process
- Monitor quality activities

_____ Maintain/update the project plan and budget as the project progresses
_____ Manage Issues until closed
_____ Support project team and if appropriate, reward them for good work
_____ Have sponsor or key stakeholders accept deliverables
_____ File project documents in project repository or publish to stakeholders.

Solution Methodology

_____ Design Solution
_____ Create Solution
_____ Test Solution
_____ Implement Solution

Issues Log

Issue Number	Date Opened	Identified By	Issue Description	Severity (H,M,L)	Assigned To	Resolution	Resolution Date	Closed By

Deliverable Acceptance

Project Name

Submitted By: _____
Date Submitted: _____

Description of Deliverable

Quality Steps Taken:

Deliverable Acceptance

☐ Accepted ☐ Rejected

Reason(s) for Rejection (Please be specific about what is missing or not working.)

Completed By:

Date: _____ Customer: _____

Date: _____ Project Manager: _____

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CLOSING

Closing Approach
Common Methodology

Overview

Purpose	The purpose of project closing is to bring the project to an end and to learn from the experience.
Pre-Conditions	• All deliverables have been accepted
Post-Conditions	• Project is complete
Completed by	Project Manager
Necessary Participants	Project Team, Key Stakeholders (Requestor, Sponsor, etc.)

Introduction

Closing is completing the project. To begin the process of closing out a project, the project manager will review with the project sponsor all project deliverables and verify that the project was completed correctly and satisfactorily. The goal is to obtain the customer/sponsor agreement that the project is complete.

It in this phase that the opportunity for improving project execution presents itself. By completing a Lesson Learned process, the project team identifies ways to improve for the next project. By archiving project documents, they will be available for the next person to use as a starting point in their project.

Lessons Learned

Lessons Learned, or sometimes also called project post mortem or project review, is a way to improve the organization project execution. The basic premise is to review the efforts for the project and identify what was done well, what did not go very well and what can be done in future projects.

Lessons Learned may be done at the end with smaller projects. With a large project, that covers a longer span of time, Lessons Learned may be done more frequently or at the end of each phase. By waiting until the end, people could forget ideas and issues that should be included in the lessons learned.

When the project manager is ready to do lessons learned, a meeting should be called to discuss what has happened on the project. The meeting is not a time for pointing fingers or describing people's shortcomings. The meeting is a time to reflect on how the project/phase was carried out. The discussion includes what things were done well and what things could have been done better. Following the meeting, the project manager should complete a Lessons Learned report with the information gathered during the meeting and distribute the report.

Closing Approach
Common Methodology

Customer Satisfaction
Gauging customer satisfaction is a good way to measure the results of the project efforts. If the ratings on the projects are very high or are improving that is a good indication that your projects are being done well. In contract, if the rating s are low or dropping then it may indicate a need to review the processes followed in the project and look for areas to improve.

Archive Project Documentation
Once the project is complete, all the project documentation should be archived for future reference to use in similar projects. This "organization knowledge" can be used as a basis for future projects. Specifically, the estimates of efforts and resulting actuals can be used to improve estimating for future projects.

Other Considerations
Often people are reluctant to end projects. This is because they feel that once the project is ended, there is little chance to get further work done. Reassuring people that there is a process to support them in the future is often necessary. The best example is for an IT system that is going into production there is usually maintenance that follows the development project.

Closing Checklist
Common Methodology

CLOSING STEPS

Project Management

_____ Have sponsor or key stakeholders acknowledge project completion
_____ Compile Lessons Learned
- Place in common location/share with project mangers for learning purposes

_____ Measure customer satisfaction
_____ Move project documents to common repository for future use.

Solution Methodology

_____ Support Solution, if appropriate

Lessons Learned
Project Name

Prepared By: _____
Date Prepared: _____

Review of Project

- **Review project goals/objectives**
- **Review deliverables and milestones**

Review Project Communications

- **What aspects of communications for this project worked particularly well?**
- **How could communications or the communication process have been improved?**

Project Planning and Execution

- **What planning and execution aspects of this project worked particularly well?**
- **What would you change regarding project planning and execution on future projects based on your experiences with this project?**

Overall

- **Overall, was the project a success?**
- **What worked very well for this project?**
- **What could have gone better?**
- **What recommendations do you have for future projects based on your experiences with this one?**

Project Acceptance

Project Name

General Information

Submitted By: _____
Date Submitted: _____

Project Approval and Acceptance

The final product (or service) of this project meets the requirements as outlined in the agreed upon Scope Statement (including updates and revisions) and has been satisfactorily implemented.

_____	_____
Project Sponsor	Date
_____	_____
Project Manager	Date
_____	_____
Director/Division/Office Manager (optional)	Date
_____	_____
IT CIO (optional)	Date

If the project is not accepted or only partially accepted then documentation describing what was accepted and the reasons for the rejection or all or the remaining parts should be provided to the Project Manager within five business days.

Final Acceptance Notice

Project Name

General Information

Submitted By: _____
Date Submitted: _____

This email serves as notice that all stakeholders have accepted the completed project and signed off on the Project Acceptance form. This project is officially closed and the project documents will be moved to the archive folder on the <specify location> within the next two weeks.