Project Management

Part of the CALHR Analyst Certificate Program

California Department of Human Resources Statewide Training

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WORKSHOP PRESENTED BY

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Project Management Fundamentals

Defining Project Management

A project is a unique venture with a beginning and an end, carried out by people to meet a specific objective within parameters of scope, time, and resources.

Course Objectives

At the end of this program, students will be able to:

- ☑ Define project management, its benefits, and key applications.

- ☑ Launch the project effectively by focusing the project team on measurable goals and objectives.

- ☑ Apply project management techniques such as work breakdown structures, project networks, Gantt charts, and resource loading & leveling.

- ☑ Use techniques to facilitate communication, conflict resolution, decision-making, and problem solving.

- ☑ Control projects more effectively by tracking progress, analyzing performance variances, and defining corrective actions.

- ☑ Perform a post-project review and document lessons learned to assist future project teams and provide feedback to management.

Project Management
Barriers and Benefits

◇ What are some of the *challenges* of managing projects?

_____

_____

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◇ Can you think of some *benefits* of implementing a
formal, structured approach to project management?

_____

_____

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Why Projects Fail

❐

❐

❐

❐

❐

The Iron Triangle

Scope

Time

Resources

Project Management Phases

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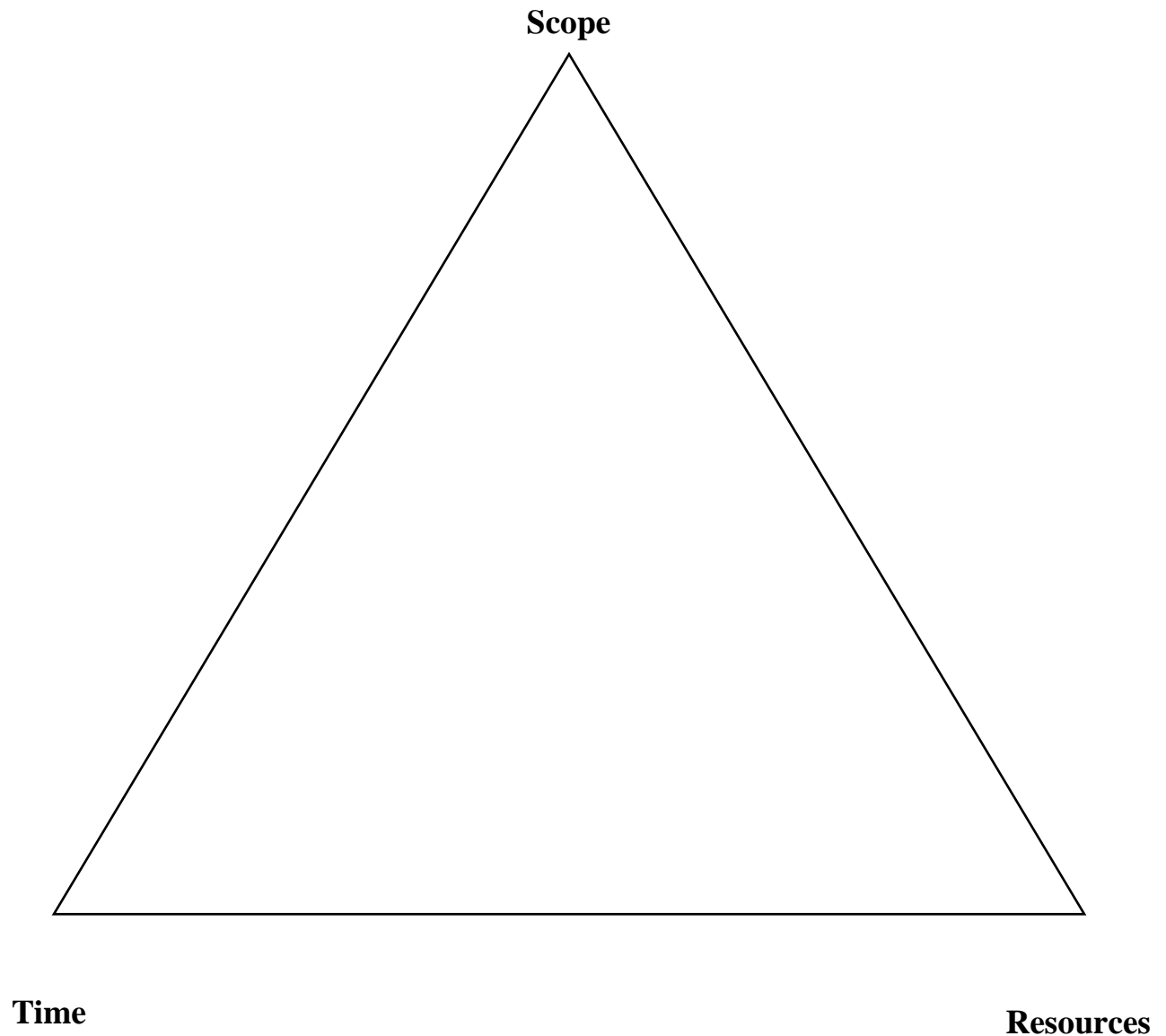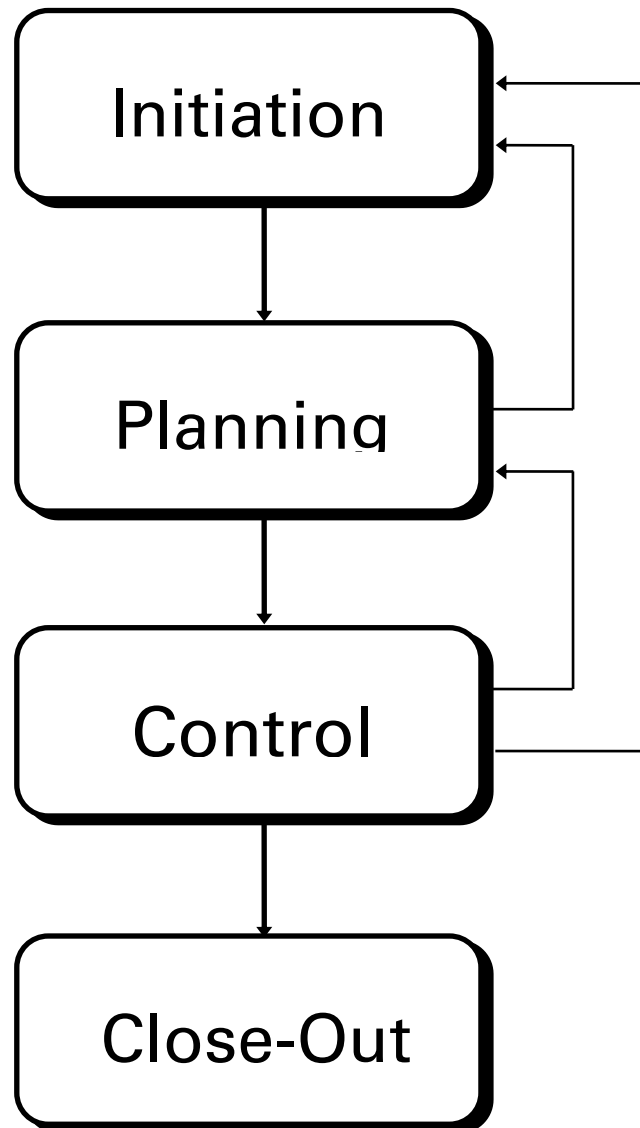
Project Management Phases

The first phase of project management, INITIATION, sets the foundation for the entire project. During this phase, project scope, deliverables and objectives are documented and the project team is selected. The initiation phase establishes expectations that must be met for the project to be judged successful at completion.

The second phase, PLANNING, establishes detailed project plans for all objectives set in the initiation phase. The project manager and team make use of a variety of planning techniques including work breakdown structures, project networks, Gantt charts and resource histograms.
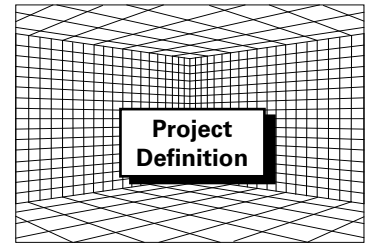
When the project plan is complete and has been approved, the project enters the third phase, CONTROL. As work progresses, the project manager controls the project by monitoring progress, resources and budget, and by supporting team members and removing roadblocks. During this phase, the project manager must keep all interested parties informed through status reporting.

These project management phases are not as linear as they appear. During both the PLANNING and CONTROL phases, changes of scope may necessitate redefinition. During the CONTROL phase, project managers may frequently revise project plans to respond to changes in the environment. Project definitions and plans should be considered to be living documents until the project is complete.

CLOSE-OUT, the final phase of project management, occurs when the project's end product is complete. During this phase, the project manager performs a post-project review or audit to evaluate the schedule, budget, and quality of the end product. This review should also evaluate what was learned about project management during the project. The resulting documentation can provide valuable feedback to management, and can help project participants improve performance through all phases of the next project.

Project Management Process

	Step	Deliverable(s)
INITIATION		
	1. Define the Project	Project Definition Documentation
	2. Establish Project Structure	Team Operating Agreement Communication Plan

PLANNING		
	3. Generate Tasks	Work Breakdown Structure Task Descriptions
	4. Determine Roles & Responsibilities and Develop Estimates	Responsibility Matrix Effort & Duration Estimates
	5. Define Task Interdependencies and Develop Schedule	Project Network Gantt (Schedule) Chart
	6. Develop Risk Management Plan	Preventive and Contingency Plans

CONTROL		
	7. Track and Manage the Project	Status Reports, Action Plans, Status Meetings

CLOSE-OUT		
	8. Perform Post-Project Review	Project History Documentation

Project
Definition

Project Management Process

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	1. Define the Project	Project Definition Documentation
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Define the Project

Description

Defining the scope of the project is the first step in the project management process. Defining project scope well is crucial to the success of the project, because it establishes a contract between the project sponsor and the project team. For some project managers, this is a legal contract. For others, the project definition document produced is informal. In either case, it is an agreement to which the project sponsor and project manager are both making a commitment.

This effort can be thought of as "drawing the target." It defines the end result of the project and may be called:

> ➔ Scope definition
> ➔ Statement of Work (SOW)
> ➔ Defining project parameters
> ➔ Business case
> ➔ Project charter
> ➔ Requirements Analysis

The project definition describes what is required as an outcome of the project. This may mean producing a tangible end product, installing a new process, issuing a report, obtaining approval to proceed, or implementing a marketing campaign.

It is important to document all information such as constraints and assumptions that will have an impact on the project, its planning, and its execution.

Project Definition Process

Throughout the definition process:

Ask questions. Ask questions to clarify project needs and requirements. Use discussions with the project sponsor and others in the sponsor's organization to seek historical information, current problems or concerns, and sponsor expectations.

1. Determine the real need:

- ⇨ Research circumstances that generated the need for the project
- ⇨ Investigate any information available from similar projects
- ⇨ Interview or survey key groups involved in the project
- ⇨ Ask why it's important to do the project now to substantiate the project's importance

2. Define the end product:

- ⇨ Project deliverables
- ⇨ Completion and success criteria
- ⇨ Features and specifications
- ⇨ Benefits to the project sponsor and end users
- ⇨ Mandatory vs. wish list features

3. Determine priorities for this project:

- ⇨ Discuss project parameters (time, resources, and scope) with the project sponsor to ascertain how you will manage trade-offs during the project.

  - ➔ *Constrain* the parameter most important to the project sponsor. This parameter can't be adjusted.
  - ➔ *Optimize* the project sponsor's second priority. This parameter may be maximized or minimized within project objectives.
  - ➔ *Accept* the project sponsor may need to go outside the original estimate. (NOTE: This is not a license to go way over budget or schedule.)

4. Develop a project objective statement

A project objective statement is a brief summary of essential project information, including:

WHO   Identify the project sponsor and users of the end product.

WHAT   Describe the project's end product. Define success and completion criteria. Include information that project participants may find unique, exciting, or special.

WHY   Describe why the project is needed. What problems will it solve for the project sponsor? -for end users? Include information about the project's strategic importance that might motivate people to participate in the project.

You may also want to include:

WHEN   State a target time frame (range) for project completion.

COST   State a budget constraint for the project.

Use the project objective statement to help create a common vision of project purpose and objectives with project sponsors, management, team members, and third parties. It should also help build enthusiasm and interest in the project among project participants.

Example: Project Objective Statement

Our objective is to implement a project management system throughout Walton Gerrard to improve planning and control of new product development projects. The project sponsor is the New Products Vice President. All Walton Gerrard project managers will use the new system, which will be customized to interface with our payroll system. Implementation will be complete at fiscal year-end.

▤ **Group Project Exercise**

This exercise establishes the project your group will use throughout the remainder of this seminar. After you develop the scope of your project, you will generate a work breakdown structure, network diagram, schedule, resource loading, and contingency plans for this project.

> **GROUP PROJECT EXERCISE**
> **Project Definition**
>
> 1. **Select a project**
> 2. **Develop a project objective:**
>   - **WHO? Project sponsor and end users**
>   - **WHAT? End product and completion criteria**
>   - **WHY? Why the project is needed**
> 3. **Pick a name for your project**

Exercise Instructions:

1. Select a project. Your project should:

    ▤ Require approximately 52 weeks (1 year) to complete

    ▤ Be manageable by your project team (take into account the number of people on your team and their skills)

    ▤ Do not worry about budget constraints

2. Using the Project Definition Worksheet on the next page, develop these elements for your project objective statement (you can use bullet points if you wish):

    ▤ **WHO**   Who is your project sponsor? Who will use the end product?

    ▤ **WHAT**   Describe the project's end product. How will you and others determine that the project is complete? How will you and others judge the success of this venture?

    ▤ **WHY**   Why is the project needed? What problems will it solve?

3. Write a clear, concise objective statement from the components you developed in Step 2 above.

4. Pick a name for your project.

Be prepared to present these elements to the rest of the class. (NOTE: Keep a record of the assumptions you make as you develop your project objective statement.)

Project Definition Worksheet

Project Name:	
Project Manager:	Date Prepared:

BACKGROUND (WHY?)
(Need, Problem, or Opportunity)

GOAL/OBJECTIVES (WHAT?)
(Deliverable or Results)

WHO?
(Stakeholders, Project Sponsor, Recipients, or Project Team)

CONSTRAINTS/PRIORITIES
(Time, Money, Resources, or Scope)

SUCCESS CRITERIA
(Achievement of functional objectives, realization of benefits, and project performance)

This project will be successful if...

As a team, write your project objective statement:

Project Management Process

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CLOSE-OUT		
	8. Perform Post-Project Review	Project History Documentation

Managing Project Relationships

Top
Management

Project
Sponsor

**Project
Manager**

Support
Groups

Team
Members

Third Parties
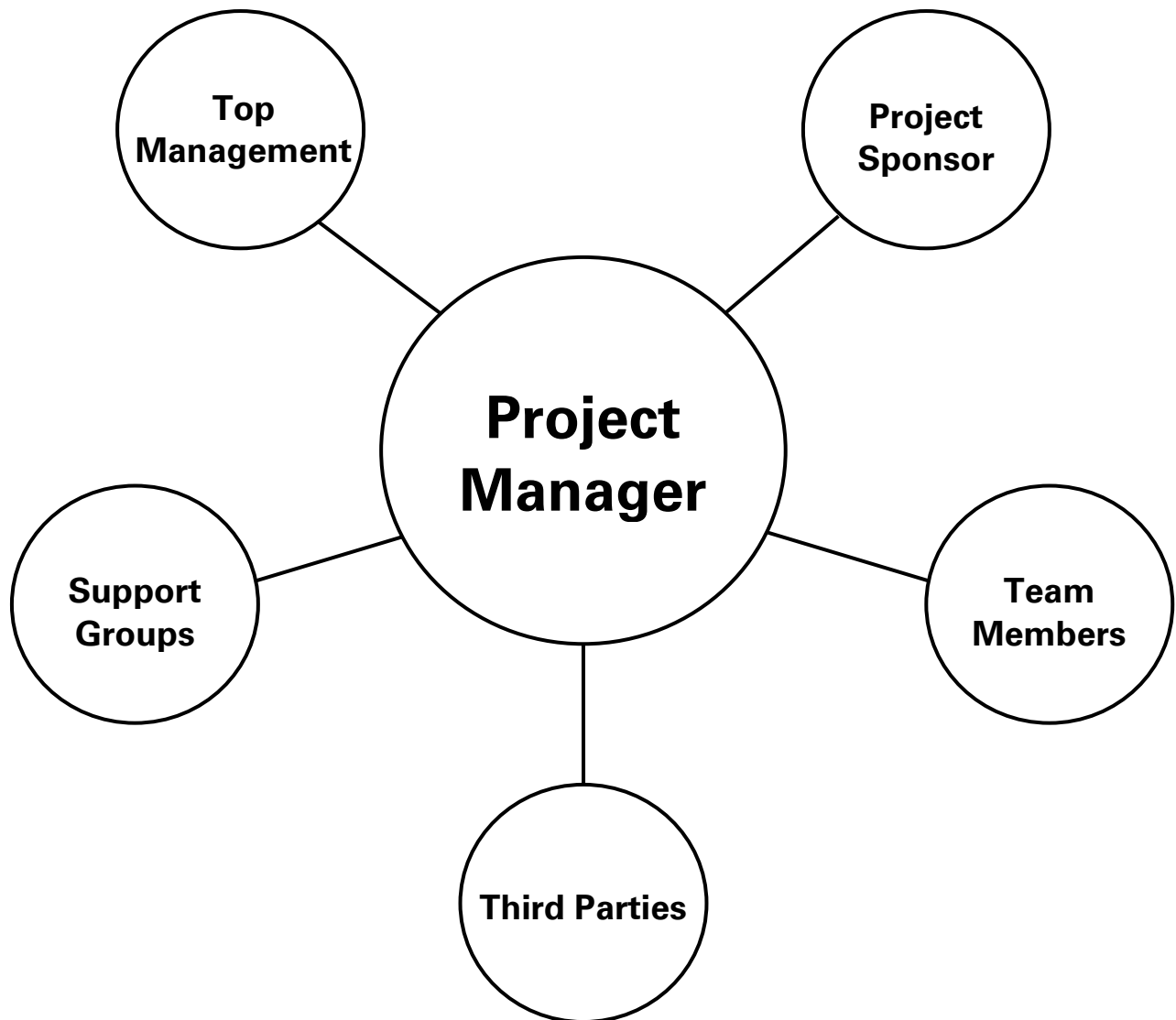
Definitions

Top Management:

- The appointed Director, the operating committee, the body of individuals who head organizations within the corporate or government structure

Project Sponsor, Client, Customer, User, or Requestor:

- Any individual or individuals requesting our services as project managers.
- This is often a member of top management.

Team Members:

- People on the project team who may or may not report to you.

Support Groups:

- Groups who are a part of the project team but who have no vested interest in the end-product.

Third Parties:

- External groups required to help us develop an end-product (e.g., a company contracted to develop a sub-assembly).

Managing Project Relationships

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The following article is based on a survey of 100 project people.

In our business careers, many of us reach a point when we must decide whether we will continue to be specialists (technicians) or become generalists (managers). Most of us who were promoted from technical to managerial roles probably looked at our boss and subconsciously said: "Why me? I'm a good technician. I like being a good technician. I feel comfortable with what I am doing. I'm good at what I'm doing. Why do I have to go into an unfamiliar world— that of being a 'people manager.' " Our boss's reply was "M-O-N-E-Y", which certainly got our attention and explained very well why suddenly we could not afford the luxury of sitting behind our desks and manipulating our technical tools. It was time to become "people-people."

Most of us had knowledge, education and book learning in the technical part of our business. However, this new requirement to become people-oriented was something that management, our management, didn't seem to sit down to teach us; nor were there the right books to read. No one seemed willing to send us off to a course to learn how to become people-oriented. Our success as a project management professional was going to depend on how well we would get along with the people in our world. Our success was no longer dependent on how technically qualified we were, but on how much cooperation we could get from the people who were working with us on the project.

Now, as project managers, let's take a look at the kinds of relationships we must manage, which typically include:

- Top management
- Project clients
- Team members
- Support groups
- Third parties.

In this article we will define these relationships and then list the kinds of problems that we may encounter with each. The benefit will be less in defining the problems than in devising solutions. So as we proceed, we will look at some of the ways in which we can solve our people-problems and make the "people-side" of our job easier and more successful.

Relationship With Top Management

By top management, we mean the president, the operating committee, the body of individuals that head each and every organization within the corporate or government structure. They are the people who direct the strategy and the development of the organization.

PROBLEMS

Top Management may:
- Not be available for meetings
- Make unrealistic demands
- Want to become too involved in the details
- Not understand enough of what is expected and may give us an unclear picture of what is expected

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SOLUTIONS

We should:
- Develop in-depth project plans and project objectives which must be approved by top management during design phase of the project
- Develop a status reporting methodology
- Include the dollars involved in every negotiated trade-off alternative
- Start by asking, then demand: We must get management's attention
- Communicate

Relationship With The Project Sponsor

By project sponsor, we mean any individual or individuals requesting our services as project managers. They should be thought of in our world as our "customer." If it is true that we as project managers provide expertise, a service, then we are truly working for the project sponsor.

PROBLEMS

The project sponsor may:
- Resist change by saying, "We've always done it this way before."
- Not understand our special jargon and buzzwords
- Have no real knowledge about project management
- Ask us to drop everything
- Question the project manager's credibility
- Not really know what he or she wants
- Not provide realistic requirements
- Have limited or no time to talk
- Be reluctant to sign-off
- Not be terribly cooperative
- Continually introduce scope changes
- Try to act like an expert
- Have no real feeling for acceptance criteria

SOLUTIONS

We should:
- Get to know the project sponsor's business as well as possible
- Make sure the project sponsor becomes the Responsible manager
- Do our homework before talking to the project sponsor
- Involve the project sponsor as much as possible
- Define the project quantifiably
- Develop a continuing communication link with the project sponsor

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Relationship With Team Members

By team members, we mean people actively involved in working on the project. They may be at the same managerial level or higher than we are in the organization. These individuals do, in fact, have a vested interest in the end-product; however, they do not have the leadership of the project team as we do, nor do they have the responsibility for the ultimate success of the end-product as we do.

PROBLEMS

We may have:
- No direct control over team members
- Difficulty measuring their productivity
- Political brush fires to contend with
  Leadership differences: we may have one set of criteria by which we are measured and they may have another

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SOLUTIONS

We should:
- Establish direct leadership prior to establishment of the project
- Take a professional approach to our relationship with these team members
- Involve team members from initiation of the project, at every phase through the project, to the completion of the project
- Create an effective reporting system
- Communicate
- Become their decision-authority focal point
- Establish frequent review dates
- Provide frequent feedback
- Give them goals and standards of performance for accomplishment
- Demonstrate a positive attitude

Relationship With Support Groups

By support groups, we mean those groups that are a part of the project team, but who have no vested interest in the end-product. We, as project managers, need their contributions in order to create our end-product. However, they don't need us nor do they need the end-product(s) we are creating. We have no real leverage. Examples of support groups may be data entry, graphics, or advertising.

PROBLEMS

- Setting priorities between all the organizations within the company that need support
- Lack of interest in the end-product
- Questionable quality of their performance
- Conflicts of interest
- Identifying requirements
- Often caught in the middle
- We always "need it yesterday"
- No recognition of above-standard performance
- Insane timetables
- Involved too late

SOLUTIONS

We should:
- Require early planning and involvement of support groups
- Generate more personal interaction
- Give them a reason to participate
- Communicate

Relationship With Third Parties

By third parties, we mean external groups whose contributions we need to complete the end-product; for example, a contracting company which is going to develop a sub-assembly.

PROBLEMS

- Determining whether we have a real need for the third party group
- The selection process: ensuring we've chosen the right group
- Pulling them into the communication network
- Educating the third party group about project scope and requirements
- Evaluating their performance

SOLUTIONS

We should:
- Clearly identify their tasks
- Put them through a bid process where they make a commitment to a final bid
- Educate them about the project and its end-product
- Conduct periodic performance reviews
- Communicate

Evolving Project Teams: The Tuckman Team Development Model

Performing

The team functions in a highly productive and interdependent manner.

Forming

Team members cautiously familiarize themselves with the project's objectives, the project manager, and with each other.

Norming

Team members have resolved issues in the storming phase and establish cooperative and productive work practices.

Storming

Control, power, and influence issues emerge as project work begins.

The Common Thread

The common thread as we look at project relationships is communication. First, we must develop a communication system which we will not allow to disintegrate no matter how burdened we become with day-to-day work. Secondly, we must communicate
to each group and individual at the beginning of the project:

- Their roles and responsibilities
- Their tasks
- How their tasks relate to those of other groups
- The scheduling and timing of their tasks
- The standard of performance they must achieve for the end-product to achieve its standard of performance

If communication is established up front and managed professionally throughout the project, then we will benefit from the improved teamwork and cooperation and will ultimately produce better project results.

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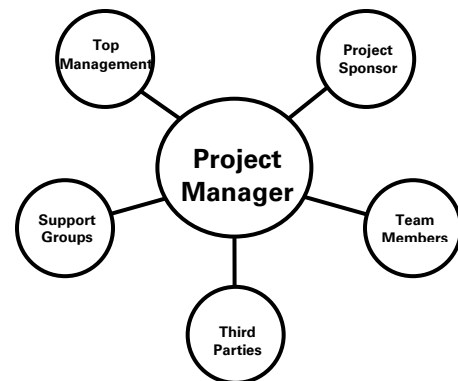
Working Together: Operating Agreements

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- Explicit, documented statements

- Describe how team members will work together

- Can prevent conflicts

- Are developed by consensus (e.g., Nominal Group Technique)

Nominal Group Technique:

1. Each person silently brainstorms his or her ideas for the team's operating agreements, and writes them down on a piece of paper.

2. A facilitator asks for one statement from each team member, one at a time, and lists them on a flipchart. (It helps to have team members sitting in a circle.) If someone has the same statement as another team member, he or she can pick another from the list. No evaluation or questioning of anyone's statements occurs during this process.

3. The facilitator continues around the team collecting operating agreement ideas, until everyone agrees all have been obtained.

4. Team members can ask for clarification on any statements they do not understand. The goal is to thoroughly understand every listed statement.

5. If anyone feels that he or she cannot live with or support a listed statement, he or she should explain why, so other team members can understand the objection.

6. Once all team members agree that they understand all the listed statements, they can be adopted as the team's operating agreements.

FTI Global IMAGE Team - Meeting Rules of Engagement

The purpose of this document is to provide direction and guidance to members of the FTI (Franklin Templeton Investments) Global IMAGE Team to ensure we perform effective and efficient communication within our team. This is a critical success factor for us all to fulfill our own Team Mission Statement:

The FTI Global IMAGE Team will deliver and support cost effective integrated imaging and workflow solutions to provide world class service to our customers.

FTI Global IMAGE Team: Meeting Rules of Engagement

These characteristics are to be expected from all members in the performance of our daily tasks in working with other team members and when we plan or participate in any meetings (in person or conference calls). Some items relate specifically to expected behavior when participating in extended working sessions or a series of brainstorming or planning meetings.

1. Have fun, stay positive
2. Identify meeting purpose – keep customer focus, result oriented
3. Define roles (who's leading or driving the issue)
4. Invite core audience only – too many participants will dilute results
5. Have strategic partner(s) involved
6. Strong proactive facilitator required for conference calls
7. Rotate facilitator role
8. Let facilitator know if you will not be able to attend, assign backup to attend in your place
9. Let facilitator know if you are leaving early
10. Members MUST come prepared
11. Proactive participation from attendees required
12. Assign a scribe to take minutes, action items and distribute to team
13. Be on time – especially if dialing in remotely, as late additions disrupt discussions in progress
14. Use a conference room where people are co-located – especially if dialing in remotely to save on ports
15. Have a realistic agenda and follow it - adhere to start/stop time
16. Have open minded discussions – leave egos at the door
17. All opinions are valid – NO bazookas
18. Ping individuals at the end to give everyone opportunity to speak
19. Provide feedback mechanism and periodic review for team participants
20. NO side conversations
21. NO distractions (turn off cell phones)
22. If it is mandatory to have a cell phone or pager on during a meeting, please set to vibrate or ring volume to the lowest setting and take the call outside.

[Project Name] Team Operating Agreement

Project Name: [Project Name]
Project Manager Name: [Manager's Name]
Project Sponsor: [Sponsor's Name]
Project Team Member Names: [Member's Names]
Date: [Date]
Prepared by: [Preparer's Name]

Team Operating Agreement

Purpose of the Team Operating Agreement (TOA)

[Describe the purpose of the document. Depending on the nature of the project or culture of the company, other sections may be added to the document.]

SAMPLE TEXT:

This TOA serves as the guidelines and ground rules to help the project team work most productively together over the course of the project. The TOA is a living document and may be updated as the need arises throughout the project. Any updates will be discussed with and ratified by the project team members.

Team Communications

[Describe how project team members will communicate with each other. Include where project documents will be stored and how they may be accessed, how and when meeting agendas and minutes will be distributed, and how confidential information will be handled.]

SAMPLE TEXT:

- The project's SharePoint site will house the most up-to-date version of project documents. All team members will be given access.
- Meeting agendas will be e-mailed to project team members at least 24 hours prior to meetings. Meeting minutes will be posted to the project SharePoint site within 48 hours after meetings.
- Team members will appreciate the sensitive nature of information discussed during this project and will share with care. Where applicable, documents will include a footer indicating that information is confidential.
- "Sidebar" conversations between team members during team meetings will not be allowed.
- All communication will be open and courteous. No "overtalking" or interrupting.
- Team members will keep each other informed.

Decision Making

[Describe how project team members will make decisions. Everyone must agree on how decisions will be made to ensure that everyone can live with the decisions made and to ensure that the project can move forward. Include guidelines for voting on decisions, how decisions will be documented, definitions of key terms, and what happens if the team cannot come to a decision (for example, escalation to the project sponsor or to a governing body).]

SAMPLE TEXT:

1. Consensus means that everyone can live with the decision. It doesn't mean everyone has to agree 100%.
2. The team will use thumbs up/thumbs down voting to make decisions quickly and move on.

   - Thumbs up = agree with no further discussion.
   - Thumbs sideways = agree, but have further questions. (Questions will be asked and answered immediately after the vote.)

- Thumbs down = cannot agree to the solution proposed. (Be prepared to answer the question: What would it take for you to go to thumbs sideways or thumbs up?) Anyone on the team may call for a vote at any time.

3. Members may abstain from voting.

4. No decision is made if there are any thumbs-down votes.

5. Meeting minutes will document the decisions made. If you have questions after reviewing the minutes, contact the project manager and determine the course of action, such as to bring questions to the team for discussion again.

Meetings

[So much project work and decision-making happens during meetings that it is important to establish how project team meetings will work. Address what will happen at meetings (generally). Establish who will be responsible for the facilitating, frequency, and scheduling of meetings, and attendance expectations.]

SAMPLE TEXT:

- Project subteam leaders will report status at each team meeting.
- Project team members will meet [frequency, date, time, and locations of meetings]. During each meeting, a "parking lot" will be used to record topics that require discussion at a later date.
- Issues, risks, change requests, and action items will be reviewed and updated at each meeting.
- The project manager will be responsible for facilitating and keeping meetings on track. Team members will accept the project manager's decision to table or "park" a discussion topic.
- Meetings will start and end on time. Team members will attend meetings in person when feasible. A dial-in number will be available for remote attendance.
- Sending "stand ins" to meetings will not be allowed unless approved by the project manager prior to meetings.
- It is the responsibility of each team member to stay current on the project team activities, even when he or she has missed a meeting.

Personal Courtesies

[Outline the personal courtesies that team members will extend to one another. The contents of this section depend largely on the culture of your company. Do not assume that personal behaviors are understood.]

SAMPLE TEXT:

- Each team member represents a specific area of expertise or business unit. Team members will bring their individual perspectives to the team and will also consider what is best for the company.
- All cell phones and other communication devices must be silenced during meetings and used on an exception basis only.

Reviewed and approved by:

_____ _____
Project Manager   Date:

_____ _____
Project Team Member Name   Date:

_____ _____
Project Team Member Name   Date:

_____ _____
Project Team Member Name   Date:

_____ _____
Project Team Member Name   Date:

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Project Team Member Name   Date:

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Project Team Member Name   Date:

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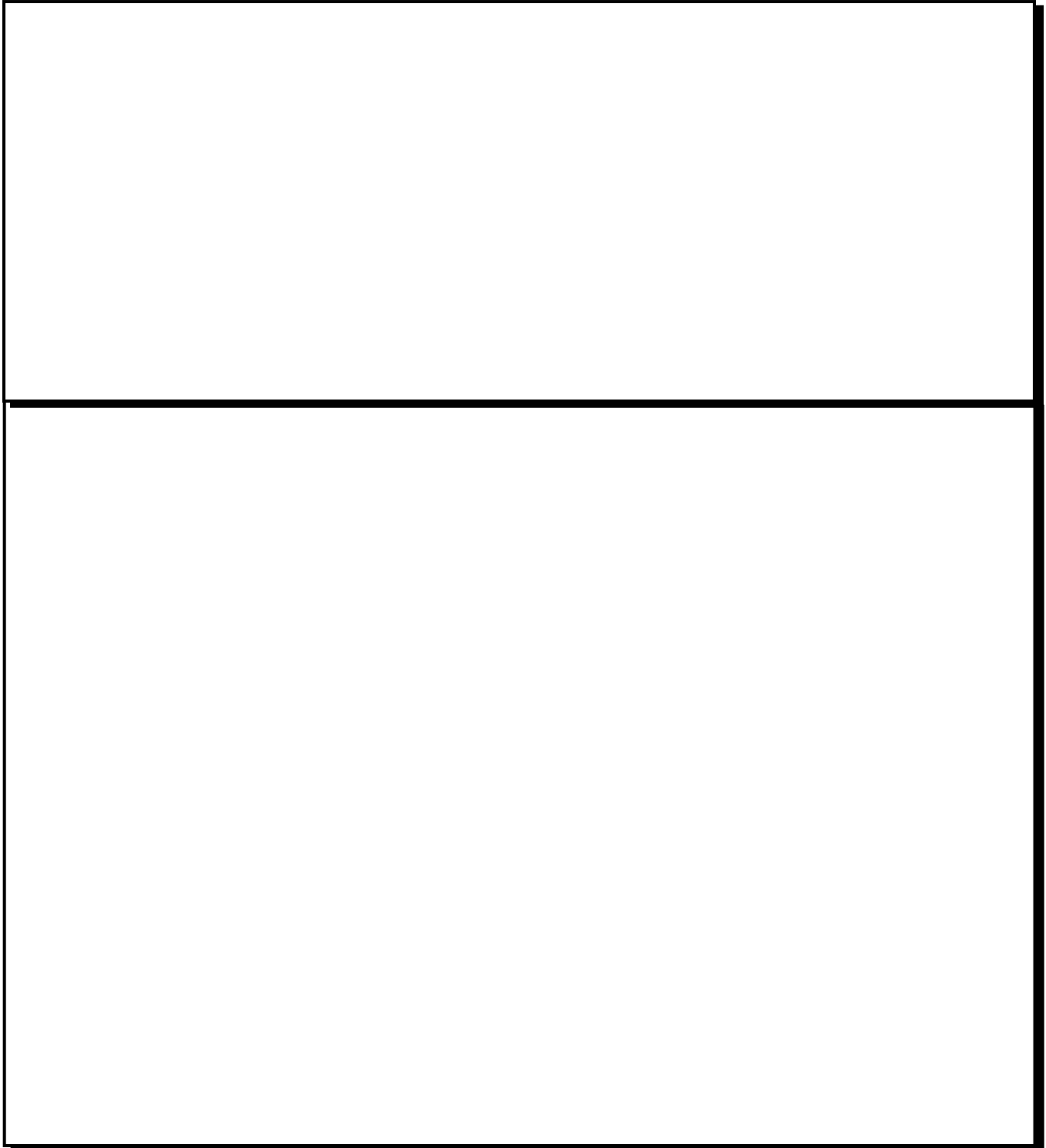Project Team Member Name   Date:

_____ _____
Project Team Member Name   Date:

Your Team Operating Agreement

As a group, generate team operating agreements using the Nominal Group Technique.

Working Together: Communication Plan

Identify additional project community members (e.g., sponsor, project manager, team members, clients/users, support groups, department managers, and external vendors) and determine:

* *What* kind of information they need
* *When* and how frequently is the information needed
* *How* will the information be communicated

Guidelines

When creating a communication plan:

☑ Senior management generally:

* Requires information less frequently and in less detail
* Prefers project progress overviews
* Prefers problems isolated with their recommended solutions

☑ Department managers typically require information on project progress and resource impact updates and projections with intermediate levels of detail.

☑ Team members generally need very detailed information from each other, so they can make well-informed decisions on their project tasks. Weekly informational updates are often effective.

☑ Clients and user groups should be regularly apprised of project progress and issues.

☑ Support groups and external vendors need to understand how their roles and responsibilities influence the project.

When in doubt, ask your project community members what kind of information they need and how they want to receive the information.

Communication Channels

RICH

Channel Richness

Physical Presence
  (face-to-face)

Interactive Channels
  (telephone, E-mail)

Personal Static Channels
  (memos, letters, tailored computer reports)

Impersonal Static Channels
(flyers, bulletins, generalized computer reports)

LEAN
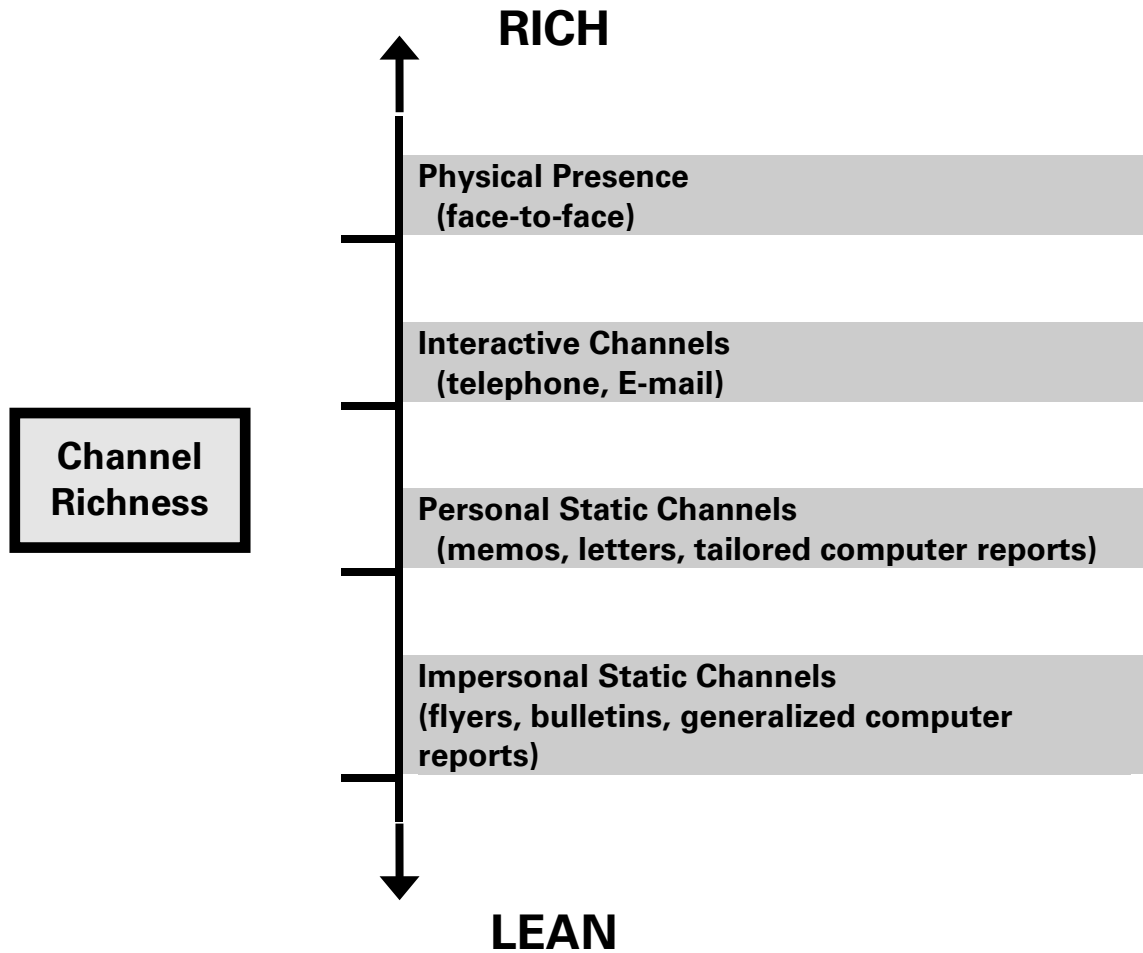
Communication Effectiveness

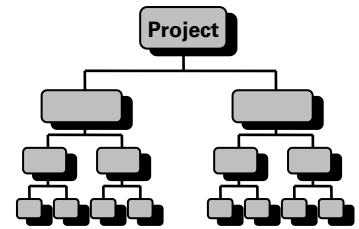|	ROUTINE	NON-ROUTINE
RICH	**Communication Failure** Data glut. Rich channel used for routine messages. Excess cues cause confusion and surplus meaning.	**Effective Communication** Communication success because rich media match non-routine messages.
Channel Richness		
LEAN	**Effective Communication** Communication success because channels low in richness match routine messages.	**Communication Failure** Data starvation. Lean channels used for non-routine messages. Too few cues to capture message complexity.

<Project Name>
Project Team Communication Plan

	Deliverable	Description	Delivery Method	Frequency	Owner	Audience
Reports	Project status report	Regular update on critical project issues	E-mail	Weekly	Project Manager	Project Manager Project Sponsor Project Team
	Quality audit report	Regular update on project quality performance	E-mail	Weekly	Quality Manager	Project Manager Project Sponsor
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
Presentations	Project review	Project status update	Meeting	Monthly	Project Manager	Project Manager Project Sponsor Project Team
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
Project Announcements	Task reminders	Task owner schedule reminders	E-mail	Daily	Project Coordinator	Project Manager Project Team
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
Reviews and Meetings	Team meeting	Meeting to review project status	Meeting	Weekly	Project Coordinator	Project Manager Project Sponsor Project Team Quality Manager
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
Team Morale	Team event	Regularly schedule team morale events	Event	Quarterly	Project Sponsor	Project Manager Project Sponsor Project Team
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>
	<Deliverable>	<Description>	<Delivery Method>	<Frequency>	<Owner>	<Audience>

The Communication Plan

Project Name:

Project Manager: Date Prepared:

Who (Project Community Members, aka Audience)	**What** (Types of Information; include the Owner))	**When** (Frequency Needed)	**How** (Communication Method)
1. Project Sponsor			
2. Project Users			
3. Project Manager			
4. Team Members			
5.			
6.			
7.			

Project Management Process

INITIATION	Step	Deliverable(s)
	1. Define the Project	Project Definition Documentation
	2. Establish Project Structure	Team Operating Agreement Communication Plan

PLANNING		
	3. Generate Tasks	Work Breakdown Structure Task Descriptions
	4. Determine Roles & Responsibilities and Develop Estimates	Responsibility Matrix Effort & Duration Estimates
	5. Define Task Interdependencies and Develop Schedule	Project Network Gantt (Schedule) Chart
	6. Develop Risk Management Plan	Preventive and Contingency Plans

CONTROL		
	7. Track and Manage the Project	Status Reports, Action Plans, Status Meetings

CLOSE-OUT		
	8. Perform Post-Project Review	Project History Documentation

Work Breakdown Structure

Description

A work breakdown structure (WBS) is a hierarchical list or diagram representing all the tasks which must be completed in order to complete the project.

The work breakdown structure becomes the foundation from which all baseline plans are built. If the WBS is faulty, all planning from this point forward will also be faulty.

☞*Ask yourself, "What needs to be done to deliver what the sponsor wants?"*
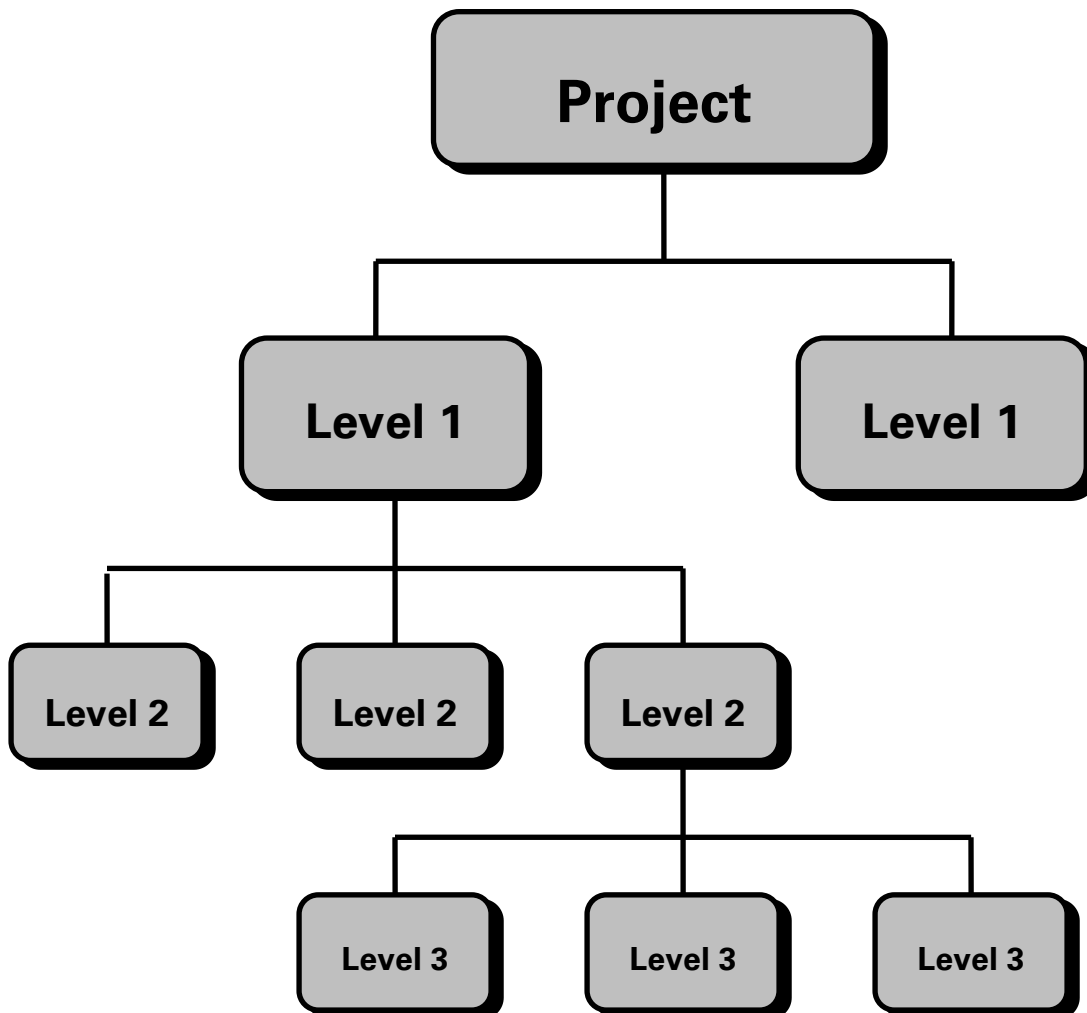
Process

- Gather input from project team:
  - Questionnaires
  - Interviews
  - Group sessions
- Restate and reconfirm project definition
- Break project into major work elements
- Break major work elements into detailed tasks
- Identify a task owner and deliverable
- Write task descriptions
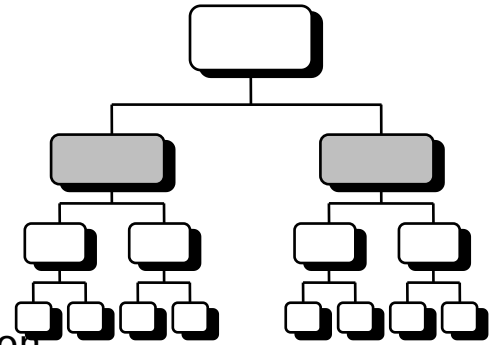
Guidelines

☑ These categories can be used to construct the first level of a work breakdown structure:

- Deliverables
- Components of the product
- Functions
- Organizational units
- Geographical areas
- Cost accounts
- Time phases
- Tasks

☑ The lowest level of the work breakdown structure should consist of tasks decomposed until you feel certain that nothing major has been omitted.

☑ It is not necessary to break all work to the same level of detail.

- If this work effort has been done many times and is routine, it may not require many levels of breakdown.

- Work that is less familiar or more complex may require more levels of breakdown.

☑   Break down work efforts until you (or the person responsible for the area) can:

–   Describe the task using an action verb
–   Assign single task ownership
–   Describe a single deliverable
–   Define appropriate and frequent project checkpoints (task start and end points)
–   Reasonably assign effort estimates to them.

Level of Detail
✓ **Action verb**
✓ **Single ownership**
✓ **Deliverable**
✓ **Frequent checkpoints**
✓ **Effort estimates**

🗀 Case Study
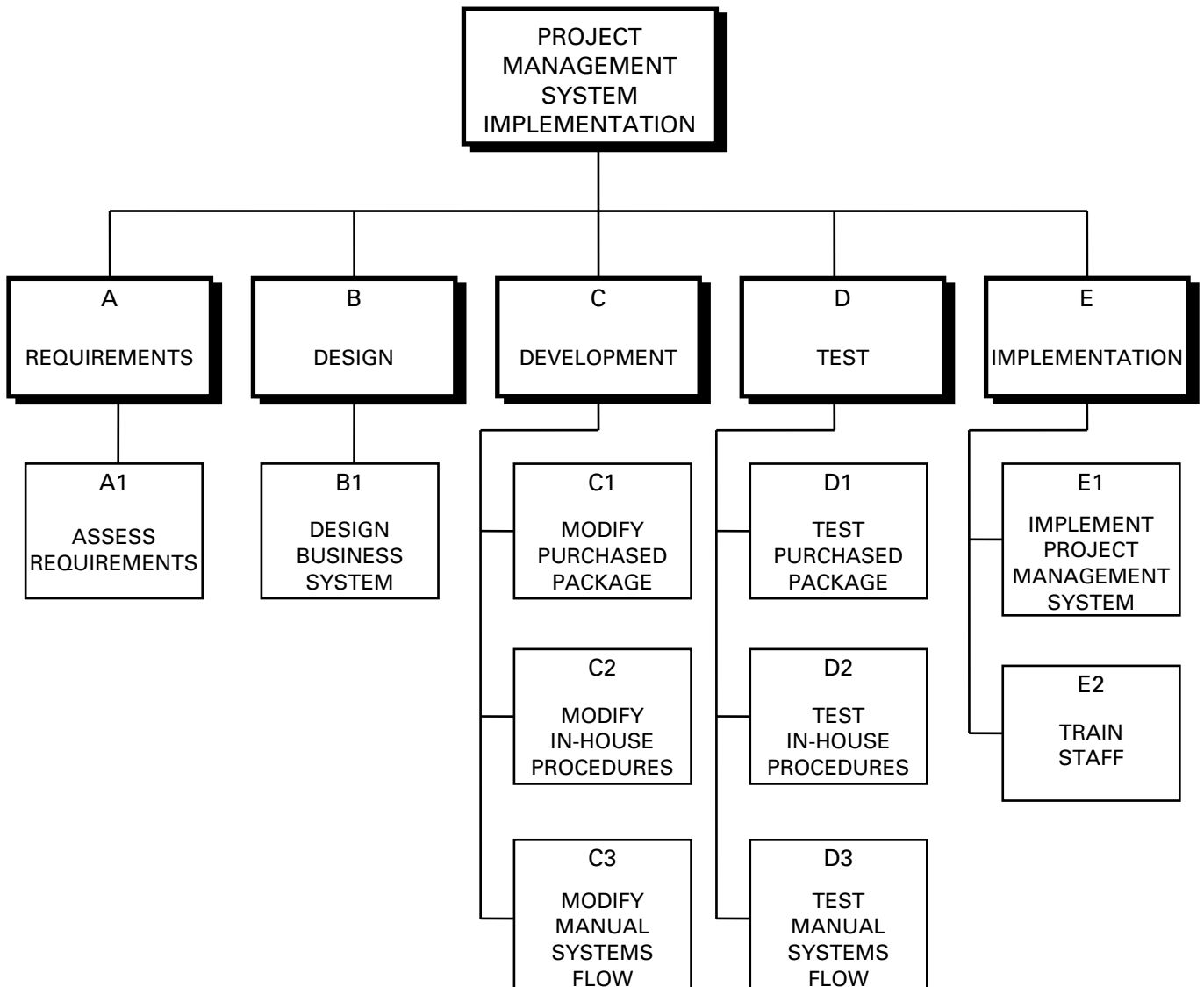
Project Management System Implementation Task List

Task ID	Work Breakdown Structure	Task Owner	Deliverable
A A1	**REQUIREMENTS** Assess Requirements	Joan R.	Requirements Document
B B1	**DESIGN** Design Business System	Bob S.	System Design Document
C C1 C2 C3	**DEVELOPMENT** Modify Purchased Package Modify In-House Procedures Modify Manual Systems Flow	Guy R. Marie S. Bob S.	Reprogrammed Package Procedures Manual Flowcharts
D D1 D2 D3	**TEST** Test Purchased Package Test In-House Procedures Test Manual Systems Flow	Guy R. Marie S. Bob S.	Tested Package Tested User Standards/Procedures Tested Operational Procedures
E E1 E2	**IMPLEMENTATION** Implement Project Management System Train Staff	Joan R. Marie S.	"Live" System Trained Staff

Task Description Worksheet

Project Name: *P M System Implementation*

Project Manager: *Joan Ryan*   Date Prepared: *3/1/95*

Task Name: *Assess Requirements*

Task Owner: *J. Ryan*   Task ID Number: *A1*

Task Description:

    Interview sponsors to determine system requirements in detail.
    Assess current project management practices, policies and procedures.
    Prioritize features of the new program based on sponsor needs.

Deliverable Description:

    The deliverable is a comprehensive requirements document which describes the assessment and findings.

Performance Criteria (for the deliverable):

    Requirements document should list detailed system requirements and priorities for each sponsor group. Current project management practices, policies and procedures should be fully documented including users' assessment of what is working well and areas for improvement. Features of the new program should clearly correlate to assessment data, and should reflect sponsor needs. Each section of the document should contain a summary and the supporting detailed information. User groups must sign off on this document.

Assumptions:

    Management of each of the user groups will provide knowledgeable resources to contribute to the assessment. These resources will be available at the outset of the project.

Task Description Worksheet

Project Name:	
Project Manager:	Date Prepared:

Task Name:	
Task Owner:	Task ID Number:

Task Description:

Deliverable Description:

Performance Criteria (for the deliverable):

Assumptions:

GROUP PROJECT EXERCISE
Work Breakdown Structure
1. **Brainstorm 3–5 Level 1 elements**
2. **Brainstorm 4-6 bottom-level tasks**
• **Action verb**
• **20–25 tasks**
3. **Check for task completeness as a group.**
4. **For bottom-level tasks list:**
• **Task ID**
• **Task Owner**
• **Deliverable**

Group Project Exercise

✎   Work with your team to create a work
          breakdown structure for your project.

Task ID & Name

**FORMAT
FOR
Post-its ™
(Bottom-Level)**

Exercise Instructions:

1.   Identify Level 1 work elements required to complete the project. Write these on Post-its ™.

2.   Identify bottom-level tasks for each upper-level work element and write these in for the *Task ID* and *Name* on the Post-its ™.

     ⇨   Begin each with an action verb.
     ⇨   Your goal is to create a total of 15-25 bottom level tasks for use in the remaining planning process. (NOTE: It is not critical that you identify every task required for the class exercise.)

3.   Post your Post-its ™ on the chart paper on the wall and walk through as a group to be sure you haven't missed any bottom-level elements.

Project Management Process

	Step	Deliverable(s)
INITIATION		
	1. Define the Project	Project Definition Documentation
	2. Establish Project Structure	Team Operating Agreement Communication Plan

PLANNING		
	3. Generate Tasks	Work Breakdown Structure Task Descriptions
	4. Determine Roles & Responsibilities and Develop Estimates	Responsibility Matrix Effort & Duration Estimates
	5. Define Task Interdependencies and Develop Schedule	Project Network Gantt (Schedule) Chart
	6. Develop Risk Management Plan	Preventive and Contingency Plans

CONTROL		
	7. Track and Manage the Project	Status Reports, Action Plans, Status Meetings

CLOSE-OUT		
	8. Perform Post-Project Review	Project History Documentation

Determine Roles & Responsibilities

Description

Determining roles and responsibilities of all project participants is an important step in project planning. It requires careful selection of team members and negotiation of specific roles each will play on the project.

Process

- List required skills

- Select appropriate team members

- Negotiate roles and responsibilities

- Gain commitment from individuals and departments involved

- Document on responsibility matrix

The Skills Inventory

It is important to assign the person with the correct skill mix to each task. Below is a sample Skills Inventory of people available to work on the P. M. System Implementation project team.

Project Name: *P M System Implementation*

REQUIRED PROJECT SKILLS

NAME	Programming	Systems Development	Analytical Skills	Technical Writing	Training Design & Presentation	Quality Assurance	Strong Verbal Communication
Joan R.			X	X			X
Seth K.						X	
Guy R.	X	X				X	
Bob S.	X		X			X	
Jean M.	X		X				
Marie S.			X	X	X		

(Row label down the left side: P R O J E C T T E A M M E M B E R S)

The Skills Inventory

Project Name:	
Project Manager:	Date Prepared:

REQUIRED PROJECT SKILLS

NAME						
P R O J E C T						
T E A M						
M E M B E R S						

Task List With Responsibility Matrix

Project Name:	Prepared by:	Page of	
Project Management System	*J. Ryan*	1 1	**LEGEND:**
Project Manager:			P=Prime
J. Ryan			S=Support

RESPONSIBILITY MATRIX

Task ID	Work Breakdown Structure	Task Owner	Joan R.	Bob S.	Guy R.	Marie S.	Jean M.	Seth K.
A1	Assess Requirements	Joan R.	P	S	S	S	S	S
B1	Design Business System	Bob S.	S	P	S	S		S
C1	Modify Purchased Package	Guy R.			P		S	
C2	Modify In-House Procedures	Marie S.	S	S		P		S
C3	Modify Manual Systems Flow	Bob S.		P		S	S	
D1	Test Purchased Package	Guy R.	S		P		S	S
D2	Test In-House Procedures	Marie S.	S			P		S
D3	Test Manual Systems Flow	Bob S.	S	P				S
E1	Implement Project Management System	Joan R.	P	S	S	S	S	S
E2	Train Staff	Marie S.				P		

What's wrong?

Responsibility Matrix
(Hubble Telescope Project)

ORGANIZATION (WHO) / PROJECT STRUCTURE BREAKDOWN (WHAT)	PROJECT MANAGEMENT OFFICE				ENGINEERING DEPARTMENT							
					ENGINEERING SERVICES SECTION			MECHANICAL ENGINEERING SECTION			OPTICS	
	Project Engineer FSS	Project Engineer Film	Subcontract Admin		Drafting	Model Shop	Data Control	Structure	Shutter	Transport	Lens Design	Shop
Transport			S		S	S				P		
Structure		S			S	S		P				S
Lens					S							
Shutter			S		S				P		P	S
View-Finder	S				S	S		S				

Guidelines

☑   In all designated areas of responsibility, an actual commitment of personnel should be made at this time. A promise to accomplish an assignment is always nice to hear, but is worthless if the staff is not available to perform the work. Each commitment should spell out exactly who will be performing what duties.

☑   Often, even though one person or department is primarily accountable, other groups may support their efforts. These groups must spell out their commitments as well.

☑   Consider adding roles beyond prime and support, such as:

         A =   Approval required
         R =   Reviewer
         N =   Notify of significant changes

Always provide a legend so that anyone viewing the chart will know what abbreviations stand for.

☑   Although more than one person may be assigned to a task, only one person should have primary responsibility for it.

☑   Allocate responsibility in the most logical *and* practical way. The person with the most experience or skill, or the greatest vested interest should be primarily responsible.

☑   As project manager, you may assume primary responsibility for some assignments but not for all. If someone else is better qualified or has a vested interest in a certain job, he or she should be responsible for it.

☑   Criteria for validating the Responsibility Matrix:
      –   Every task must have one person holding prime responsibility - the owner.
      –   Every task can only have one owner, and not more than one.
      –   Assign tasks to the people who have the skills, time, and desire to complete them.
      –   Do not assign people to a task for political reasons if they cannot contribute.

Develop Estimates

Description

The deliverable for the second part of Step 4 is a complete set of task estimates. An estimate is a prediction of the time required to complete a task. Two types of estimates are required:

➔ An *effort estimate* reflects the amount of personal or billable time an individual is planning to devote to task completion.

➔ A *duration estimate* reflects the length of time between a task's start and finish.

Activity Duration Estimating

Input	Tools	Output
Activity Lists	Expert Judgement	Activity Duration Lists
Constraints	Analogous estimating*	Basis of estimates
Assumptions	Simulation**	Activity list updates
Resource requirements		
Resource capabilities		
Historical information		

*Analogous estimating is also called top down estimating. It means using the actual duration of a previous, similar activity as the basis for estimating the duration of a future activity.
**Simulation involves calculating multiple durations with different sets of assumptions.

Process

⇨   Be sure each task has been defined as clearly as possible, including its deliverable and performance criteria.

> **Process**
>
> ✓ **Clarify task definitions**
> ✓ **Collect data from similar projects**
> ✓ **Develop effort estimates**
>   ○ **Individual effort**
>   ○ **Total effort**
> ✓ **Determine the nature of each task**
>   ○ **Resource driven**
>   ○ **Duration driven**
> ✓ **Develop duration estimates**

⇨   Collect data from similar previous projects. Select relevant data to develop estimates.

⇨   Develop effort estimates for each task, including:

> *   Individual effort: The effort each person will contribute to the task
>   *   Total effort: The effort the team as a whole will contribute (sum of the individual effort estimates).

⇨   Determine the nature of each task:

> *   Resource driven tasks: duration is based on the amount of effort and the number of resources
> *   Duration driven tasks: duration is not influenced by adding resources.

⇨   Develop duration estimates for each task.

Guidelines (Overall)

☑   Compare project tasks to tasks on previous similar projects

☑   Develop standards that can be applied to the work

Guidelines for Effort Estimates

☑   These variables (and others) may impact effort estimates:

– Product issues such as complexity and level of innovation
– People issues such as expertise and learning curve
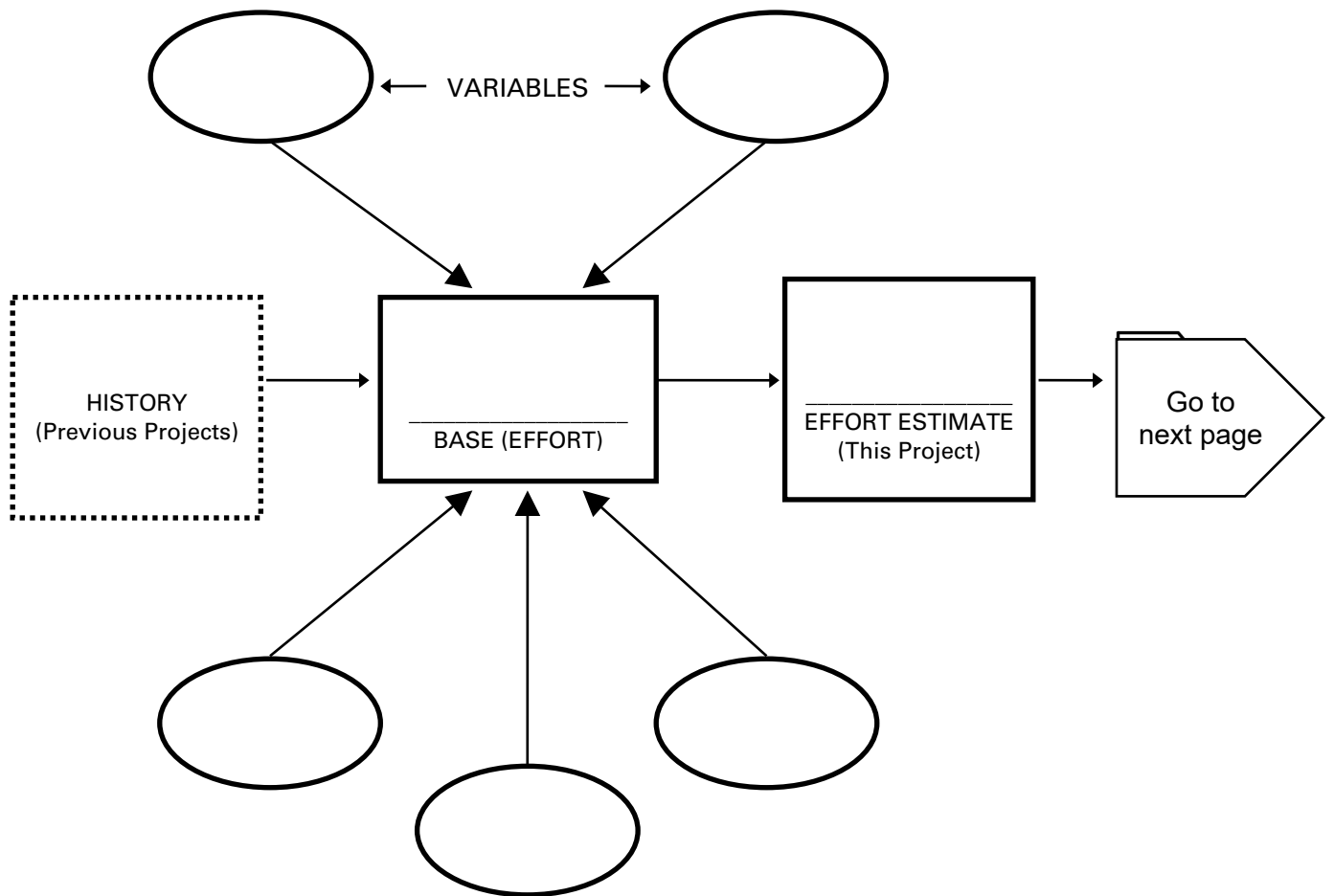– Project specific issues such as location and knowledge of the project sponsor

For example, a less experienced team member may require more effort to complete a task than a more experienced person.
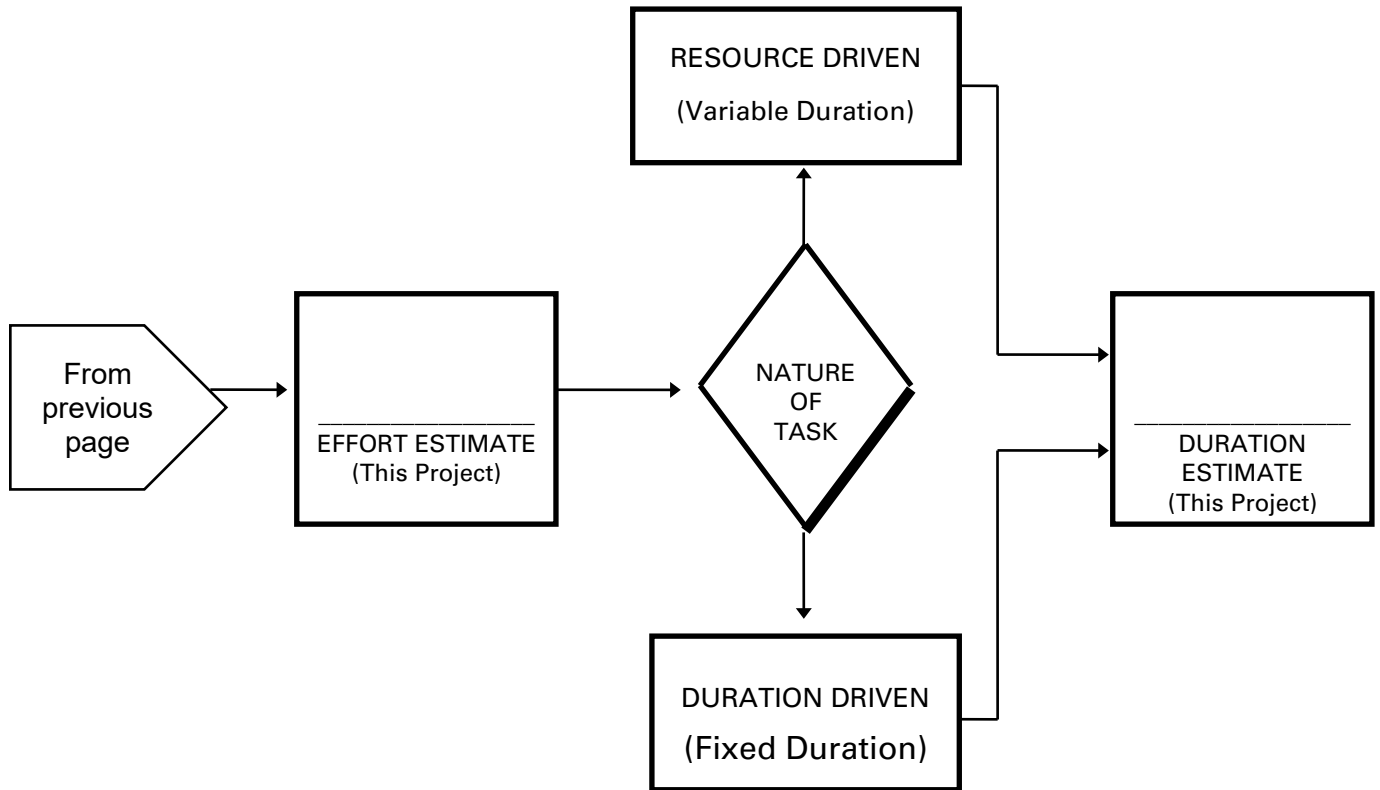
Guidelines for Duration Estimates

☑   Duration estimates for **resource driven tasks** are based on the amount of effort and the number of resources. The more resources assigned to the task, the sooner the task finishes. The duration of a resource driven task is based on:

– The amount of effort each person will contribute
– The availability of each resource
– How people will work together

Duration estimates for **duration driven tasks** stay the same no matter how many resources are assigned to the task. For example, it will take two working days to drive equipment from City A to City B, no matter how many people are riding in the truck. These variables may impact the duration of a duration driven task:

– Shipping time   – Approval time
– Processing time   – Delivery lead time
– Cycle time   – Non-working time
– Review time

VARIABLES

HISTORY
(Previous Projects)

BASE (EFFORT)

EFFORT ESTIMATE
(This Project)

Go to
next page

```
                                          ┌─────────────────────┐
                                          │  RESOURCE DRIVEN     │
                                          │                     │
                                          │  (Variable Duration) │
                                          └─────────────────────┘
                                                   ▲
                                                   │
┌──────────┐      ┌──────────────────┐          ◇
│   From   │      │                  │       NATURE        ┌──────────────────┐
│ previous │ ───▶ │ _____ │ ───▶    OF     ───▶ │ _____ │
│   page   │      │ EFFORT ESTIMATE  │       TASK          │    DURATION      │
└──────────┘      │  (This Project)  │          ◇          │    ESTIMATE      │
                  └──────────────────┘          │          │  (This Project)  │
                                                ▼          └──────────────────┘
                                          ┌─────────────────────┐
                                          │  DURATION DRIVEN     │
                                          │                     │
                                          │  (Fixed Duration)    │
                                          └─────────────────────┘
```

Task List With Estimates

Project Name:	Prepared by:	Page	of	
Project Management System	*J. Ryan*	1	1	**LEGEND:**

Project Manager: *J. Ryan*

P=Prime
S=Support

Effort Estimates

RESPONSIBILITY MATRIX

Task ID	Work Breakdown Structure	Task Owner	Joan R.	Bob S.	Guy R.	Marie S.	Jean M.	Seth K.	Total Effort Est	Duration
A1	Assess Requirements	Joan R.	P .50	S .10	S .10	S .10	S .10	S .10	1.0	1.0
B1	Design Business System	Bob S.	S .75	P 1.50	S .75	S .75		S 1.25	5.00	2.50
C1	Modify Purchased Package	Guy R.			P 2.00		S 2.00		4.00	2.00
C2	Modify In-House Procedures	Marie S.	S .25	S .50		P 1.00		S .50	2.25	1.50
C3	Modify Manual Systems Flow	Bob S.		P 1.00		S .70	S .30		2.00	4.00
D1	Test Purchased Package	Guy R.	S .25		P 1.00		S .75	S .25	2.25	1.50
D2	Test In-House Procedures	Marie S.	S 1.00			P 1.00		S 1.00	3.00	1.00
D3	Test Manual Systems Flow	Bob S.	S .50	P 1.00				S 1.00	2.50	1.00
E1	Implement Project Management System	Joan R.	P .50	S .50	S .50	S .50	S .50	S .50	3.00	1.50
E2	Train Staff	Marie S.				P .50			.50	.50

Group Project Exercise

🖉   Expand your Task Description
      Worksheets to include task
      estimates, and add Duration to Post-
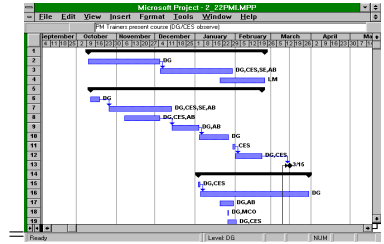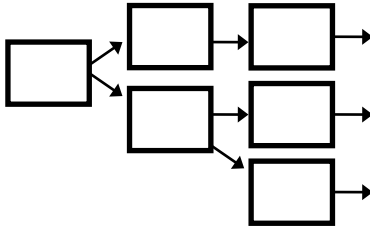   its™.

Task ID & Name

Task Duration

**FORMAT
   FOR
Post-its ™**

Exercise Instructions:

1.   Develop estimates:

   ⇨   *Duration:* EDetermine the effort in weeks each person will contribute
         to each task. Using this estimate, determine the duration of each task.
         *   Your duration estimates should be at least as long as the largest
             individual effort estimate for a task.
         *   For this exercise, use whole weeks when you estimate duration.

2.   Add Duration to Post-its **™** (Bottom-Level).

       (NOTE: Keep in mind that the accuracy of your estimates for this exercise
       may be reduced because of the level of detail and/or lack of team
   experience.)

Project Management Process

INITIATION	Step	Deliverable(s)
	1. Define the Project	Project Definition Documentation
	2. Establish Project Structure	Team Operating Agreement Communication Plan

PLANNING		
	3. Generate Tasks	Work Breakdown Structure Task Descriptions
	4. Determine Roles & Responsibilities and Develop Estimates	Responsibility Matrix Effort & Duration Estimates
	5. Define Task Interdependencies and Develop Schedule	Project Network Gantt (Schedule) Chart
	6. Develop Risk Management Plan	Preventive and Contingency Plans

CONTROL		
	7. Track and Manage the Project	Status Reports, Action Plans, Status Meetings

CLOSE-OUT		
	8. Perform Post-Project Review	Project History Documentation

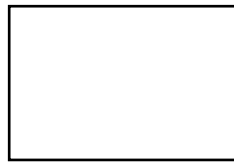# *Identify Task Interdependencies and Critical Path*
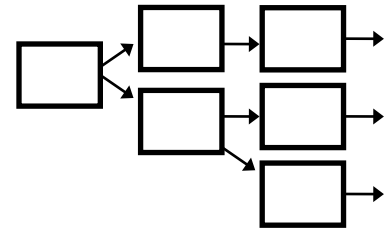
Description

The first part of Step 5 involves determining the logical order in which tasks are to be performed. The interdependencies can be portrayed in a graphical format known as the project network or PERT Chart*

Post-it™ Approach

Symbols:

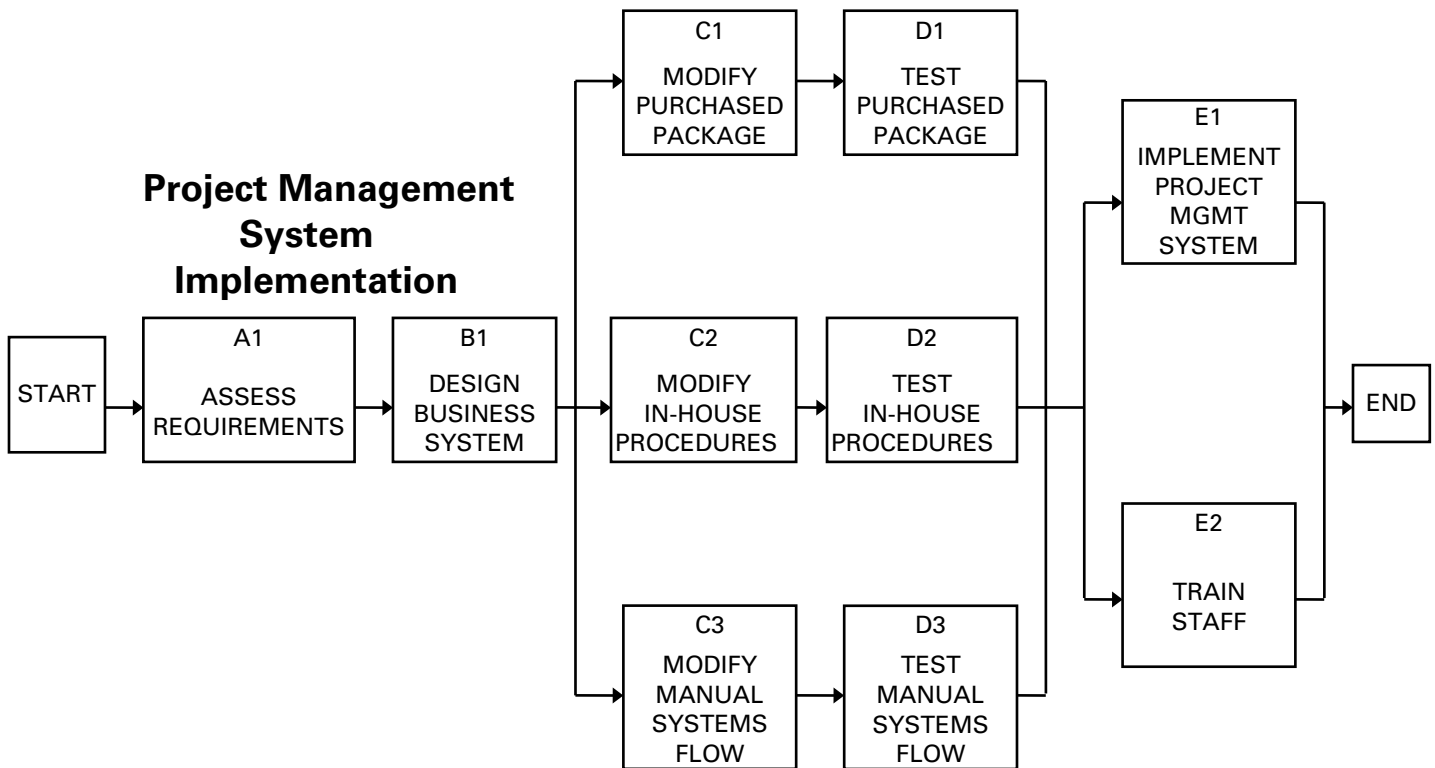**Task:**   Implies Work Effort
and Deliverable

Dependency: ⟶

Shows task relationships

** PERT Chart = Performance and Evaluation Review Technique Chart*

Process

Post-it™ Approach

```
                              ┌──────────┐   ┌──────────┐
                              │   C1     │   │   D1     │
                              │ MODIFY   │   │  TEST    │
                              │PURCHASED │──▶│PURCHASED │
                              │ PACKAGE  │   │ PACKAGE  │
                              └──────────┘   └──────────┘
```

Project Management System Implementation

	A1	B1	C2	D2	E1	

START → A1 ASSESS REQUIREMENTS → B1 DESIGN BUSINESS SYSTEM → C2 MODIFY IN-HOUSE PROCEDURES → D2 TEST IN-HOUSE PROCEDURES → E1 IMPLEMENT PROJECT MGMT SYSTEM / E2 TRAIN STAFF → END

C3 MODIFY MANUAL SYSTEMS FLOW → D3 TEST MANUAL SYSTEMS FLOW

1.   Identify starting tasks. Move them to the left side of a flipchart page.

2.   Identify each successor task's immediate predecessor(s) by asking what task or tasks produce the deliverable(s) needed to begin.

> ➢ Place successor tasks to the right of their predecessors.

3.   Identify which tasks could take place concurrently.

4.   Connect predecessor tasks to successor tasks with arrows in one direction only: Left ➔ Right.
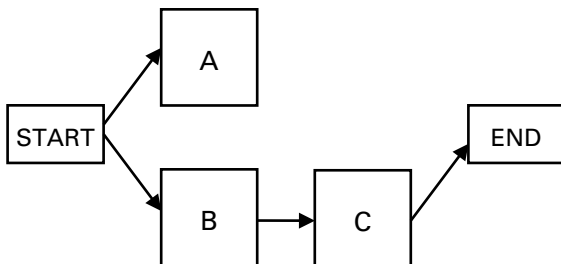
Typical Dependency Errors

Loop:
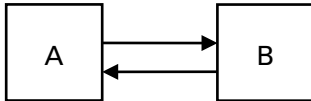
Loop: **A circular dependency relationship.** For instance, making Task A dependent on Task B *and* Task B dependent on Task A would create a loop.

Solution: *Decide which task really comes first or repeat the same series of tasks as many times as you think they will occur.*

Dangler:

Dangler: **A task with no successors.**

Solution: *Make the dangler task a predecessor of some other task, connect it to the end, or set a fixed completion date.*

(NOTE: If there is no deliverable, don't perform the task!)

> **GROUP PROJECT EXERCISE**
>
> **Project Network**
> 1. **Transfer starting tasks to beginning of flipchart**
> 2. **Place successive tasks to the right of their dependent tasks**
> 3. **Use arrows to indicate task dependencies**

Group Project Exercise

✎   Create a project network using Post-It ™ notes.

```
┌─────────────────────────┐
│                         │
│     Task ID & Name      │
│                         │
│   Task Duration         │
│                         │
└─────────────────────────┘
```

FORMAT
  FOR
Post-its ™
(Bottom-Level)

Exercise Instructions:

Choose a facilitator to arrange bottom-level task Post-It ™ notes.

1.   Transfer Post-It ™ notes for starting tasks to the left side of the blank flipchart paper.

2.   Place successive tasks to the right of tasks they depend on.

3.   Connect tasks with arrows to indicate dependencies.

Critical Path Analysis

The critical path is the longest series of tasks in the project network. It is important to identify the critical path because a delay in any task on the critical path could delay the entire project.

After developing estimates and defining task interdependencies, enough information is available to answer important questions, such as:

🕐   What is the duration of the entire project?

🕑   When will tasks take place?

🕓   How much scheduling flexibility do we have?

🕔   What's the impact of a missed deadline (task delay)?

🕘   How can we meet the mandated due date?

Critical path analysis provides the answers to these and many other questions.

Critical Path Terminology

You may see these terms in the project management literature:

ES   =   Early Start (The earliest a task can start)

EF   =   Early Finish (The earliest a task can finish)

LS   =   Late Start (The latest a task can start)

LF   =   Late Finish (The latest a task can finish)

Float =   The amount of time a task can be delayed before it impacts the project end date. Also known as *slack.*
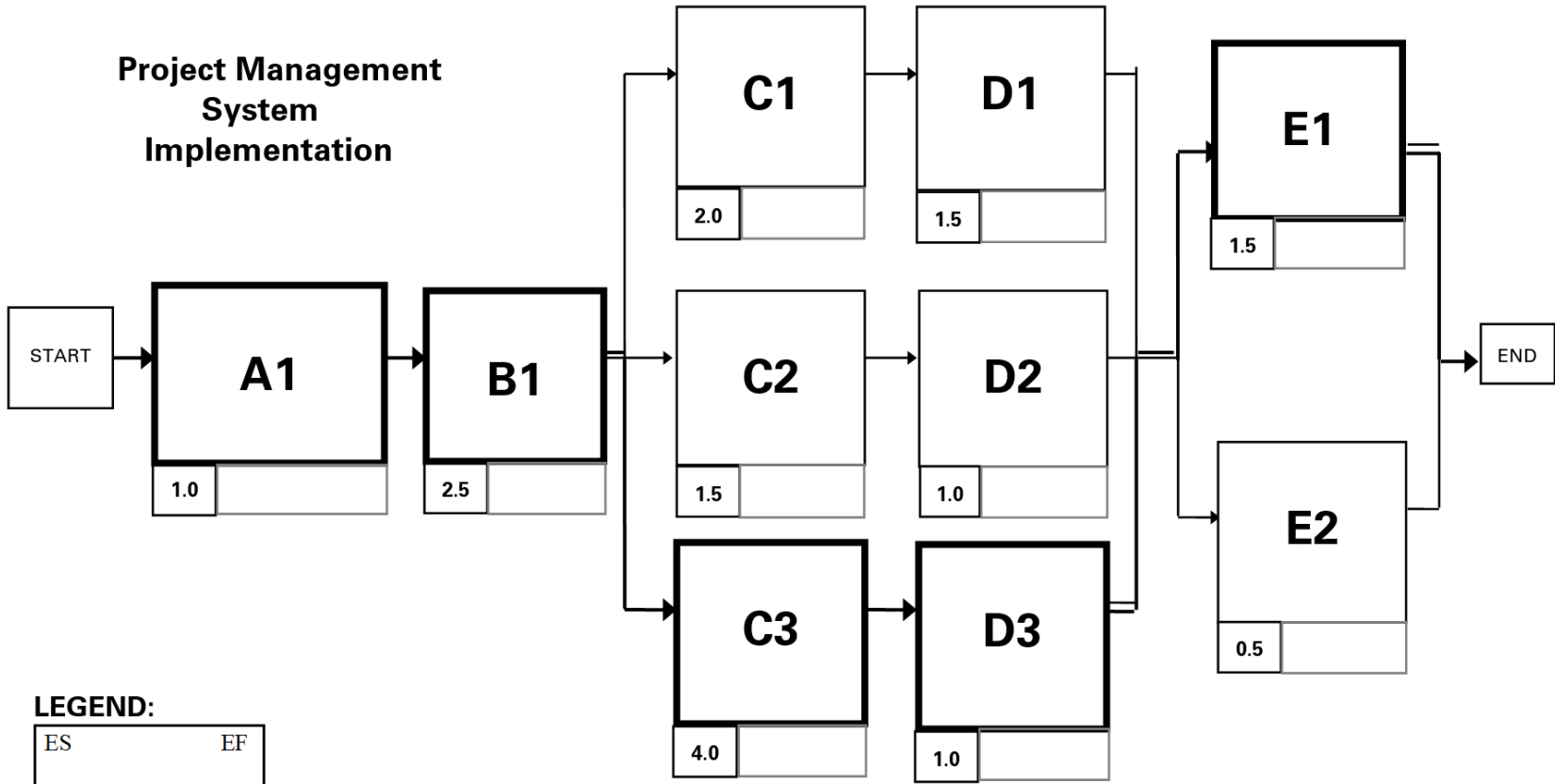
T_E =   Estimate to project completion (duration of the critical path)

T_e =   Duration estimate for each task

Critical Path Formula

1. Forward Pass: ES + Duration = EF

2. Backward Pass: LF – Duration = LS

3. Calculate Float: LF – EF = Float

Items with no float represent the Critical Path.

Analyze Critical Path

Project Management System Implementation

C1	2.0
D1	1.5
E1	1.5
A1	1.0
B1	2.5
C2	1.5
D2	1.0
E2	0.5
C3	4.0
D3	1.0

LEGEND:

ES		EF
	TASK	
LS		LF
Duration	Float	

Float = LF - EF

T_E = 10 weeks

T_E = Completion Time: Time of the longest (critical) path

Critical Path Compression

These techniques can be used to shorten the critical path (without spending money):

➲➲   Reallocate the resources from paths with float to the critical path

➲➲   Break tasks into subtasks that can be done in parallel

➲➲   Overlap tasks by using partial dependencies

➲➲   Reconsider the exactness of the dependencies, and possibly resequence

➲➲   Remove obstacles

These compression techniques may also be used, but will impact budget and/or scope (so negotiate with your project sponsor first):

$/⚫   Place the affected departments on overtime

$/⚫   Add shifts

$/⚫   Subcontract jobs

$/⚫   Increase facilities

$/⚫   Reduce scope

Group Project Exercise

✎   Expand your network to include:

- Early Start, Early Finish
- Late Start, Late Finish
- Float
- Critical Path
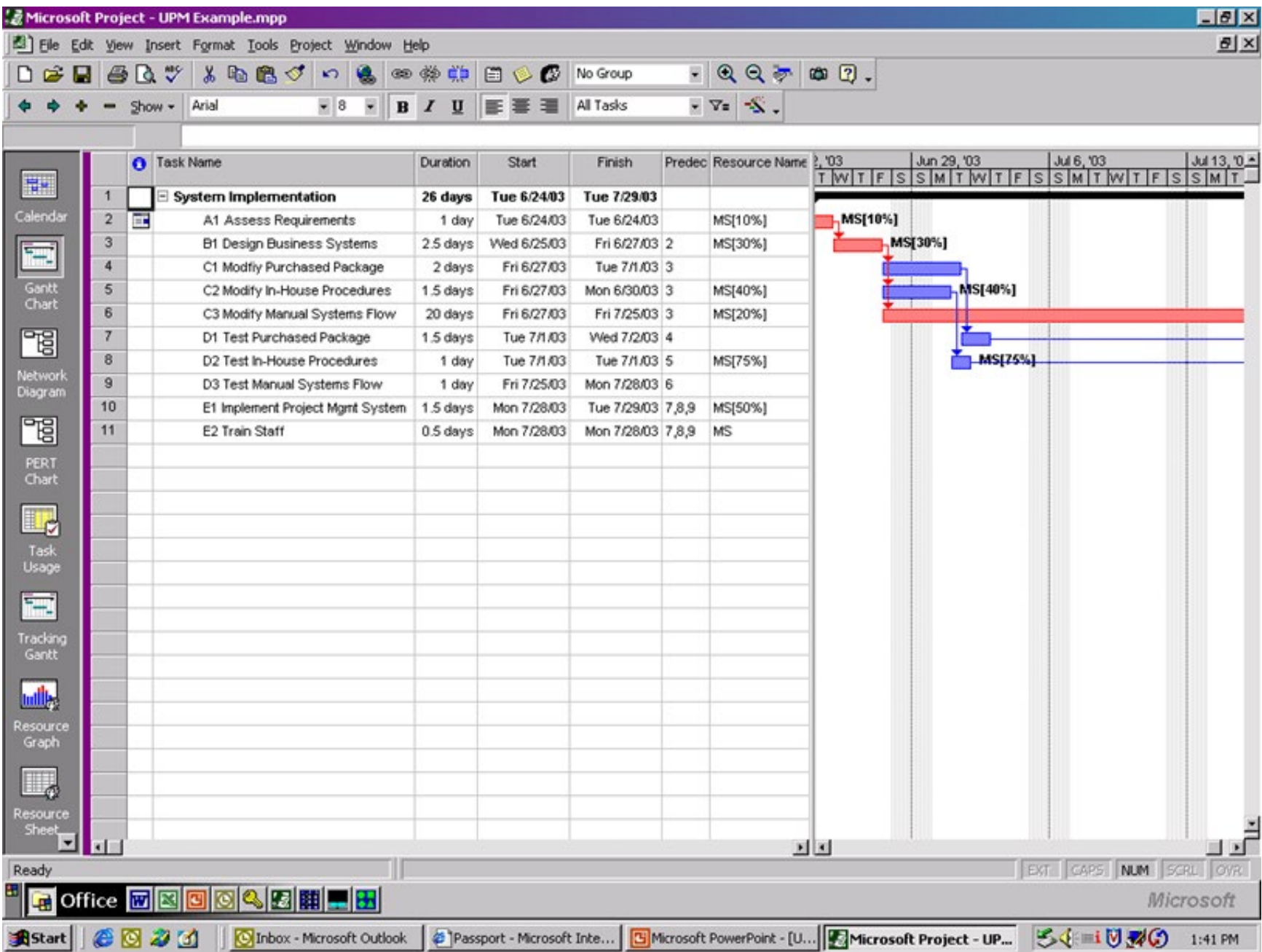
Exercise Instructions:

1.   Post each task's **duration** estimate on your network.

2.   Do a **forward pass** to determine the **Early Start** and **Early Finish** for each task.

3.   Do a **backward pass** to determine the **Late Finish** and **Late Start** for each task.

4.   Calculate **Float** for each task by subtracting Early Finish from Late Finish.

5.   Identify and mark the **critical path** (tasks with no Float).

[Note: If needed, use critical path compression techniques to ensure that your project meets the 52 week requirement.]

Congratulations!

At this point in your actual project, you would be ready to input your schedule information into Microsoft Project or whatever other project management and communication tools you use.
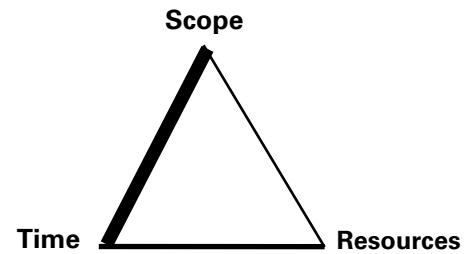
Project Management Process

	Step	Deliverable(s)
INITIATION		
	1. Define the Project	Project Definition Documentation
	2. Establish Project Structure	Team Operating Agreement Communication Plan

PLANNING		
	3. Generate Tasks	Work Breakdown Structure Task Descriptions
	4. Determine Roles & Responsibilities and Develop Estimates	Responsibility Matrix Effort & Duration Estimates
	5. Define Task Interdependencies and Develop Schedule	Project Network Gantt (Schedule) Chart
	6. Develop Risk Management Plan	Preventive and Contingency Plans

CONTROL		
	7. Track and Manage the Project	Status Reports, Action Plans, Status Meetings

CLOSE-OUT		
	8. Perform Post-Project Review	Project History Documentation

Scope

Develop a Risk Management Plan

Description

Time   Resources

A risk management plan enables the project manager to reduce the impact of unplanned events which could threaten the success of the project. Developing a risk management plan involves identifying risks, rating their probability and impact, then creating preventive and contingency plans for the most important risks.

Process

⇨   Review the project plan with the project team to identify risks that could negatively impact the project in these areas:

➔   Schedule: Events that could cause delays to the schedule
➔   Scope: Events which threaten successful completion of the project's end product
➔   Budget: Factors which may increase costs beyond the project's budget limits
➔   Resources: Factors that may threaten worker availability for the project.

⇨   Evaluate the importance of each risk event by asking these two questions:

➔   What is the probability that this risk will occur? (high, medium, or low)
➔   What would be the impact if this risk should occur? (high, medium, or low)
(NOTE: Consider evaluating impact to schedule, scope, and budget separately.)

⇨   For risks with high probability and impact rankings, develop a risk management plan that will include:

➔   A risk task owner to monitor each risk event
➔   Preventive plans (to prevent the risk from occurring or to reduce the impact if it occurs)
➔   Contingency plans (to be implemented if the risk occurs)
➔   A trigger point for each contingency plan that specifies the circumstances that would trigger the plan into action.

Risk Management Worksheet

Project Name: PM System Implementation	
Project Manager: J. Ryan	Date Prepared: 3/4/05

High Risk Situation:
Team member leaves

Preventive Plan(s) *
Demonstrate need
More $
Vitamin C
Don't give work to look good (won't be promoted)
Involve in decision making (ownership)

Probable Cause(s):
Illness
Priority changes
Conflict
Job opportunity –
reassigned
Career change – quit

PROBABILITY Hi=3; Med=2; Lo=1 Score =	IMPACT Hi=6; Med=4; Lo=2 Score =

Contingency Plan(s) *
Cross-train other team members
Change scope w/approval
Change timeframe w/approval
Select replacement
Renegotiate targets
Reassign tasks
Outsource

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	3	High Probability Low Impact (Dealer's Choice)	High Probability High Impact (Prepare Contingency Plan)
	2		
		Low Probability Low Impact (Forget it)	Low Probability High Impact (Prepare Contingency Plan)
	1		

0   1   2   3   4   5   6

IMPACT

Trigger Point(s)
Lack of interest
Frustration
Appearance—3 pc suit for dr. visit?
Low morale
Comments

*   The Contingency Plan responds
      to the Risk Situation.

** The Preventive Plan responds
      to the Probable Cause(s).

Guidelines for Analyzing Risks

Consider risks that would impact each of these areas:

☑ Schedule:

- Tasks on critical path
- Tasks which have several predecessors
- Tasks that have minimal float
- Optimistically estimated tasks
- Tasks reliant on external dependencies, such as vendor shipments
- Major milestones
- Unforeseen tasks

☑ Resources:

- Tasks with only one person assigned
- Tasks with many people assigned
- Tasks using scarce resources
- Underskilled or unqualified people
- Illness/Turnover

☑ Budget:

- Uncertainty of corporate budgeting
- Shifts in corporate budget priorities
- Uncertain resource costs

☑ Scope:

- Uncertainty of new product development
- Dynamics of customer requirements
- Availability of tools and/or techniques

Consider sources of risk such as political or regulatory environments to ensure that your risk analysis is complete.

Guidelines - General

☑   Revise the schedule by:

- –   Negotiating deadlines of high risk tasks to accommodate potential slippage
- –   Scheduling tasks later in the project which can be postponed or canceled if necessary
- –   Conservatively estimating duration's of tasks on critical path

☑   Revise resource plans by:

- –   Reassigning strong people to high risk tasks and critical path tasks
- –   Assigning a person, if only minimally, as a back-up to any tasks where the loss of a team member would be damaging

☑   Revise budget by:
- –   Using contingency funds
- –   Renegotiating contracts
- –   Renegotiating requirements and/or deliverables
- –   Investigating other sources of funding

☑   Make and document plans including:
- –   Preventive actions that will be taken to reduce or remove risk
- –   Contingent actions that can be implemented should a problem occur
- –   The circumstances that would trigger each contingency plan into action

Group Project Exercise

✎   Assess risks and devise contingency plans for your group project.

Exercise Instructions:

1. Using the Risk Management Worksheet on the next page, define major risks to your group project. (*Identify at least five risks.)*

2. Assess the probability and impact of each high risk situation. Decide which of the risks you've listed poses the greatest threat to your project.

3. Define the probable cause of your greatest risk.

4. Devise preventive actions and contingency plans for your greatest risk.

5. Define circumstances that would trigger the contingency plans into action.

6. Be prepared to share one of your risk analyses with the rest of the class.

Risk Management Worksheet

Project Name:	
Project Manager:	Date Prepared:

High Risk Situation:

Preventive Plan(s) **

Probable Cause(s):

Contingency Plan(s) *

PROBABILITY Hi=3; Med=2; Lo=1 Score =	IMPACT Hi=6; Med=4; Lo=2 Score =

P 3
R
O
B
A 2
B
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L
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T 1
Y

	High Probability Low Impact (Dealer's Choice)	High Probability High Impact (Prepare Contingency Plan)
	Low Probability Low Impact (Forget it)	Low Probability High Impact (Prepare Contingency Plan)

0   1   2   3   4   5   6

IMPACT

Trigger Point(s)

*   The Contingency Plan responds
     to the Risk Situation.

**   The Preventive Plan responds
     to the Probable Cause(s).

Planning Phase Wrap-Up

To wrap-up the planning phase for your project, consider these steps that are described on the following pages:

❶	Validate Plans
❷	Obtain Approvals
❸	Set the Baseline Plan
❹	Create a Project Notebook

1. Validate Plans

Planning Checklist

Project Name:	
Prepared By:	Date Prepared:

	YES	NO
Do tasks relate to objectives?		
Have all tasks needed to accomplish objectives been included in the plan?		
Does each task have a deliverable?		
Have delivery lead times been accounted for in the schedule?		
Have completion criteria been established for each task?		
Is one person responsible for each task?		
Have tasks been reviewed with project team members?		
Do project team members agree on:		
Task estimated effort?		
Task planned start date?		
Task planned completion date?		
Will project team members receive a work schedule weekly?		
Does a network diagram exist?		
Is a master plan to be maintained? Who will maintain it?		
Has original or revised plan been approved by management?		

Project Team Member Agreement Form

Project Name: Project Manager:

Team Member: Department Manager:

ID	Project Tasks	Scheduled Start	Scheduled Finish	Effort Required

Performance Expectations:
- Timely completion of project tasks to quality specified
- Attendance at all project team meetings
- Weekly written status reports turned in to project manager on time
- Notification to project manager of any potential unresolved problems that could endanger project task completion
- Commit to and respect team operating agreements (attached).

Project manager agrees to provide team member:
- Aggregate project status reports on a timely basis
- Agenda for all project team meetings before each meeting
- Ongoing performance feedback
- Documented performance feedback to functional manager on a quarterly basis.

Department manager agrees to provide to team member:
- Adequate time to satisfactorily complete project task assignments
- Consideration of project manager's performance feedback when evaluating team member's overall performance.

Project Team Member: Date:

Project Manager: Date:

Department Manager: Date:

OBTAIN APPROVALS
• **Involve all parties**
• **Format plan professionally**
• **Set formal process**
• **Allow time**
• **Communicate!**

2. Obtain Approvals

Before the project can begin, what sign-offs or approvals do you need?

Guidelines

There may be questions from the people who must approve the plan. There will be fewer questions if you:

☑   Involve all parties during the development of the plan

☑   Format the plan as clearly and professionally as possible

☑   Set up a formalized approval process

☑   Allow time for approval

☑   Communicate, communicate, communicate!

3. Set the Baseline Plan

SET THE BASELINE PLAN
•   **Valid when approved**
•   **Not set in concrete**
•   **Flexible management tool**
•   **Basis for warning signals**
•   **Can be negotiated**

The approved plan as the baseline is a prerequisite to controlling a project.

Guidelines

Remember that the baseline:

☑   Is valid at the moment it is approved

☑   Is not set in concrete

☑   Should be considered a flexible management tool

☑   Is the basis for warning signals

☑   Can be renegotiated with the proper documentation and professional presentation. Most projects have hidden reserves. Before negotiating tradeoffs, make sure that you have isolated the appropriate negotiable management reserve(s) for your project.
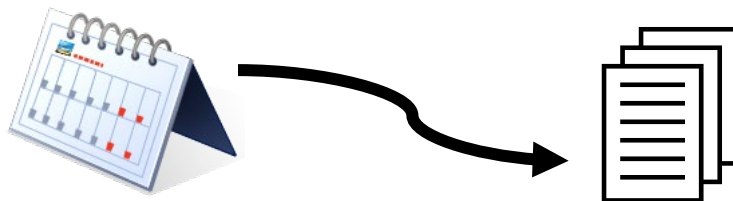
4. Create a Project Notebook

Project notebooks are valuable for project managers:

- *During the project* they are a source of current project information
- *After the project* they guide planning efforts for new similar projects
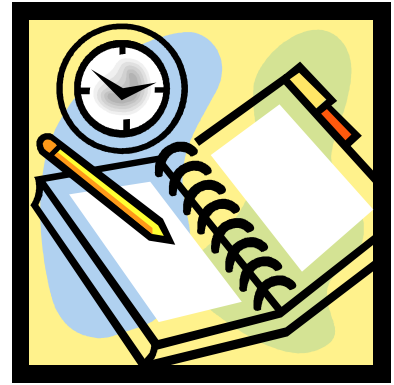
Guidelines

The Project Notebook should contain:

☐   Project Definition Documentation

☐   Communication Plan

☐   Task Descriptions

☐   Estimates

☐   Assumptions

☐   Schedule

☐   Contingency Plans

☐   Status Reports

☐   Issues List

☐   Project Summary (at the end of the project)

Project Management Process

INITIATION	Step	Deliverable(s)
	1. Define the Project	Project Definition Documentation
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PLANNING		
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CONTROL		
	7. Track and Manage the Project	Status Reports, Action Plans, Status Meetings

CLOSE-OUT		
	8. Perform Post-Project Review	Project History Documentation

Project Control Process

```
                    ┌──────────────────────────┐
                    │  Define and plan the project │
                    └──────────────────────────┘
 ┌──────────┐                    │
 │  Manage  │─────────────┐      ▼
 │  change  │        ┌──────────────────┐◄────────┐◄──
 └──────────┘        │  Collect actuals  │◄────────┤
                     └──────────────────┘◄────────┤
                              │
                              ▼
                          ◇ Compare
                            actual to     No variance ──┐
                          ◇                             │
                              │
                       Variance exists
                              │
                              ▼
                          ◇ Determine
                            cause and
                            analyze       Low impact ───┘
                            impact ◇
                              │
                       Medium to high
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                              ▼
                    ┌──────────────────┐
                    │ Take corrective action │
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                              │
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         │          ┌──────────────────┐
         │          │  Make revisions to │
         │          │    project plan    │
         │          └──────────────────┘
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         │          ┌──────────────────┐
         └──────────│ Report status and revisions │──
                    └──────────────────┘
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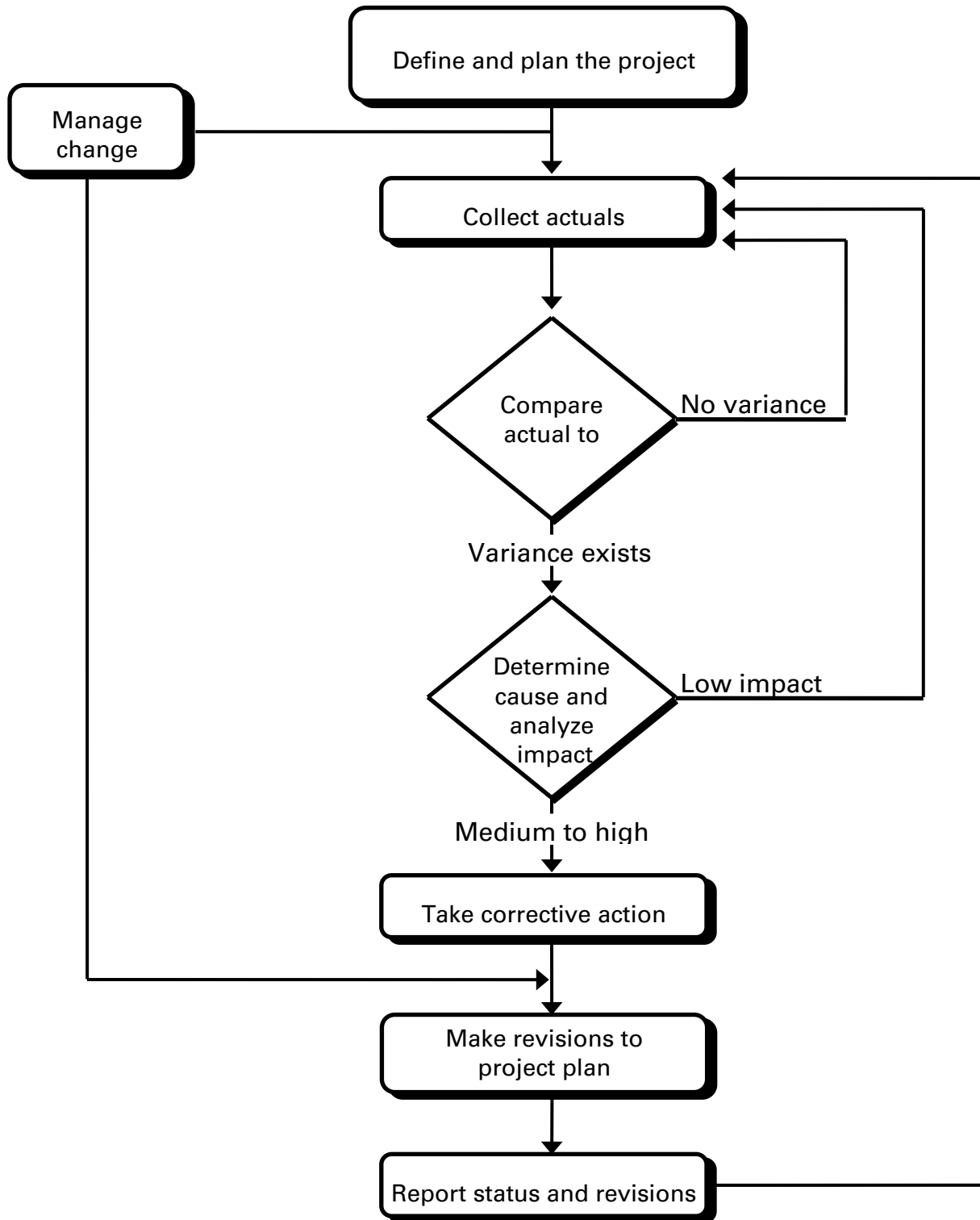
Track and Manage the Project

Description

After definition and planning are complete, work begins and the project manager's job shifts to tracking and managing the project. This phase is often called project control, which requires taking steps to ensure that actual performance conforms to the plan. Basic tools for controlling a project include:

➔   The project definition which serves as a contract for measuring the success of the project, the end product and the product manager

➔   The project plan: schedule, resource plan, and budget

➔   Status reports which indicate work progress and problems

.

Process

⇨   Define and plan the project: The project definition sets standards for project success. The project plan serves as a roadmap for the project team's efforts. Both the definition and the plan set expectations. Your job is to see that those expectations are met.

⇨   Collect actuals: First, decide what's important to track and boundaries within which control should be maintained. Then set up mechanisms for collecting actuals regarding schedule and costs, and for assessing quality of the work being done.

⇨   Compare actual to plan: Compare actual results to plan by asking a series of questions to reveal variances, and evaluating variances to determine whether or not they are within an acceptable range.
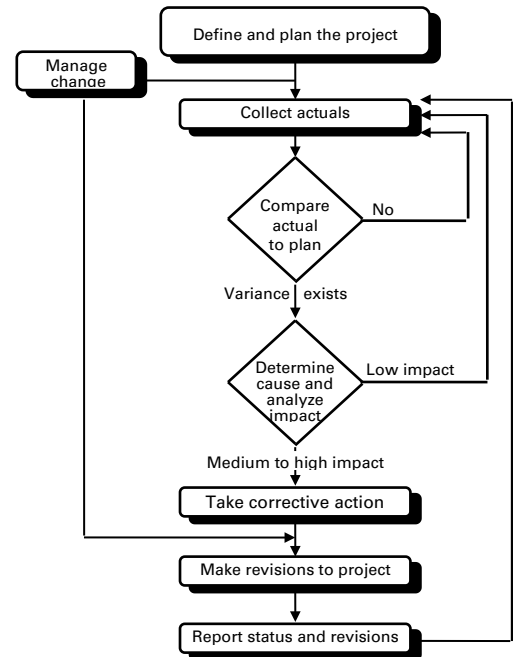
⇨   Determine cause and analyze impact: When variances occur, look carefully to find what is causing them. Whatever the cause of the variance, analyze its impact on the project.

> "Small problems are difficult to see, but easy to fix. However, when you let these problems develop, they are easy to see but very difficult to fix."
>
> ~ Niccolo Macchiavelli,
> *Il Principe* (1530)

⇨   Take corrective action: Decide upon a course of action based on the variance's cause and impact.

⇨   Make revisions to project plan: Based on corrective actions and progress to date, make adjustments to the project schedule, staffing, and/or budget to ensure that the plan remains a viable roadmap for all project participants.

⇨   Report status and revisions: Keep all parties informed of project status, revisions to the plan, problems and solutions. To establish a status reporting process, first analyze the information needs of people involved or interested in the project; then design and schedule reports to meet those needs.

⇨   Manage change: During the project, it's important to evaluate the impact of scope changes before making decisions to implement them.

Typical Control Factors

Typical control factors that are identified in projects are:

Scheduling:
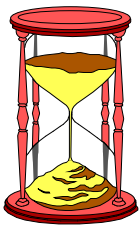
- Critical path tasks not meeting deadline
- Tasks slipping their Late Start dates
- Tasks slipping their Late Finish dates (more important)
- High risk paths
- Tasks with multiple revised deadlines
- Additional scope requests which extend deadlines

Staffing:

- More staff than planned being used
- Staff not available
- Staff being pulled off the project
- Staff with wrong skill set working on the project

Budgeting:

- Over budget by x% or $
- Under budget by x% or $
- Everything we have discussed above
- Changes in pricing due to inflation and other unplanned events.

(NOTE: All of the above are based on the estimates being correct in the first place, which may not be the case.)

> ## *Suggestions for Taking Corrective Action*

If the project is over budget:

- Look for ways to reduce costs of remaining work
- Reduce scope
- Negotiate for increased funding.

If the project is behind schedule:
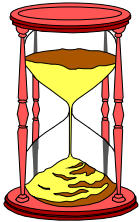
- Reschedule tasks to shorten remaining work
- Use incentives for on time completion
- Add resources

(NOTE: Review critical path compression techniques in Step 5.)

☑ **Guidelines for Negotiating Trade-offs**

- Reconfirm project client's priorities

- Identify reserves

    – Time
    – Dollars or resources
    – Scope

- Assess impact of:

    – Making changes
    – Not making changes

- Present recommendations

Make Revisions to the Project Plan

Based on corrective actions and progress to date, make adjustments to the project plan to ensure that it remains a viable roadmap for all project participants.

Scope

Time

Resources
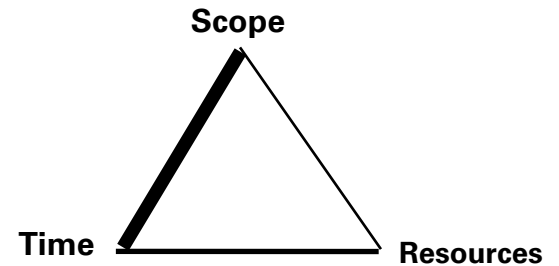
☑ Guidelines:

- Define reserves in time, money or scope (deliverables).

- Allow changes to be made by authorized personnel only.

- Consider possible adverse effects of a plan change.

- Don't be afraid to change the plan when necessary.

- Study alternatives. Work within the constraints given. Ask for trade-offs only when absolutely necessary.

- Don't over react.

- Document the approved change.

- Track the change.

Report Status and Revisions

To establish a status reporting process:

1)   Fill out status reports (optional)
2)   Report status at team meetings
2)   Keep status reports for documentation

	Top Management	Immediate Manager	Team Members
Levels of Detail	- Less detail - More graphic - Information tool	- Intermediate	- Greater detail - Lists - Action tool
Timing	- Less frequently (minimum monthly)	- Intermediate	- More frequently (minimum weekly)
Content	- Just the overview problem isolation and recommendations	- What they request to see	- Overview and sections which impact them

⇨   What should a status report include?

- Status as of (date)
    Schedule
    – Brief synopsis of achievements and milestones since last report
    – Graphics such as a milestone or Gantt chart
    Budget
    – Line or bar graph
    – Explanation of variance

- Goals for next report period
    – Pending events, completions, milestones
    – Graphic showing a 30-60 day forward view

- Potential problems that
    – Threaten project completion
    – Are beyond the capability of the project manager

- Recognition for special achievements and demonstrated excellence

⇨   What else would you add for your environment?

☑ **Guidelines for Written Status Reports**

Guidelines for Status Reports
• **Simple, easy to read** • **Adapted to audience** • **Flexible** • **Concise** • **Graphic** • **Easy to update** • **History**

When you're creating status reports, follow these guidelines:

- Keep them simple and easy to read.

- Adapt them to the needs and interests of each audience.

- Be flexible. Adjust your status reports to suit the message and the image you want to communicate.

- Be concise to ensure that busy managers will read and understand them quickly.

- Use graphics whenever possible to help get the message across.

- Make them easy to update.

- Keep copies of status reports to document project history.

Project Status Report Template

Members to Project Manager

Team Member: _____
Reporting Period Ending: _____

Task or Deliverable	Planned Completion Date	Actual Completion Date
Name of the task or deliverable you are reporting on		
Accomplishments		
What achievements have been made since the last status meeting? *When were these achievements made?*		
Ongoing Activities		
Are there any planned tasks that weren't completed? *What remains to be completed for the task?* *Will the task be completed by its planned date?* *Are there any problems preventing the completion of a task?*		
Upcoming Activities		
What activities are planned for the next work period? *How long are the planned activities expected to take?*		

Summary Status Report Template

Project Manager to Sponsor

| Project Name: |
| Reporting Period Ending: |

Project Description:
Provide the objective statement from the project charter.

Project Status:
Provide an overview for the general progress of the project. *Is the project scope, schedule, and cost on track?* *Accomplishments for this reporting period.* *Planned activities for next reporting period.*

Milestones	Scheduled Date	Comments

Risk:	Priority Score:	Assignee and Action Required:

Miscellaneous:
Any remaining relevant information that doesn't necessarily fit into other sections.

☑   **Guidelines for Project Review Meeting Agendas**

- Identify major accomplishments since last review

- Review schedule status (actual vs. plan)

- Discuss major issues (problems) and action plans to mitigate, including request for specific help from your customer or boss, if appropriate

- Review action items committed to by participants

- Outline plans for next period

☑ **Question Guidelines to Ask Your People at Project Review Meetings**

- Do you foresee any problems coming up in the future?

- Are you or your resources being threatened (people being pulled off projects)?

- Are you or your people working productively? If not, why?

- Are you planning ahead for key deliverables, documentation, etc.?

- Have you turned up a technology, procedure or product we might employ elsewhere?

Project Control Process
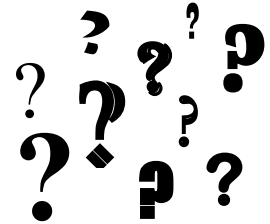
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                        ┌─────────────────────────┐
                        │  Define and plan the project  │
                        └─────────────────────────┘
   ┌──────────┐                      │
   │  Manage  │                      ▼
   │  change  │──────────┐   ┌─────────────────┐◄───────
   └──────────┘          └──►│  Collect actuals  │◄──────
                             └─────────────────┘◄─────
                                      │
                                      ▼
                                 ╱Compare╲      No variance
                                ◄ actual to ►──────────────
                                 ╲         ╱
                                   Variance exists
                                      │
                                      ▼
                                 ╱Determine╲    Low impact
                                ◄cause and  ►──────────────
                                ◄ analyze   ►
                                 ╲ impact  ╱
                                 Medium to high
                                      │
                                      ▼
                        ┌─────────────────────────┐
                        │   Take corrective action   │
                        └─────────────────────────┘
                                      │
                                      ▼
                        ┌─────────────────────────┐
                        │   Make revisions to       │
                        │      project plan         │
                        └─────────────────────────┘
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                                      ▼
                        ┌─────────────────────────┐
                        │  Report status and revisions  │
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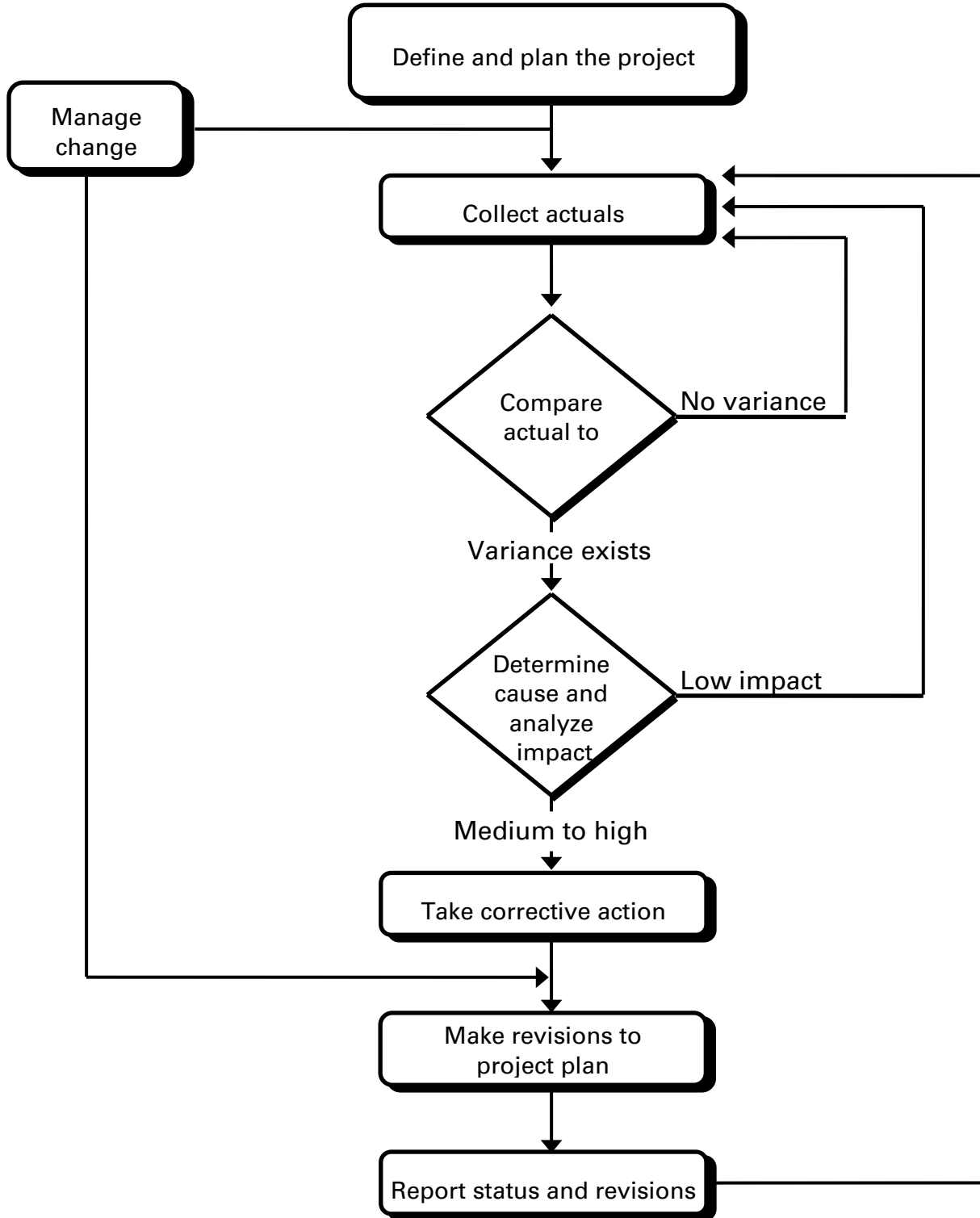
Change Management Process
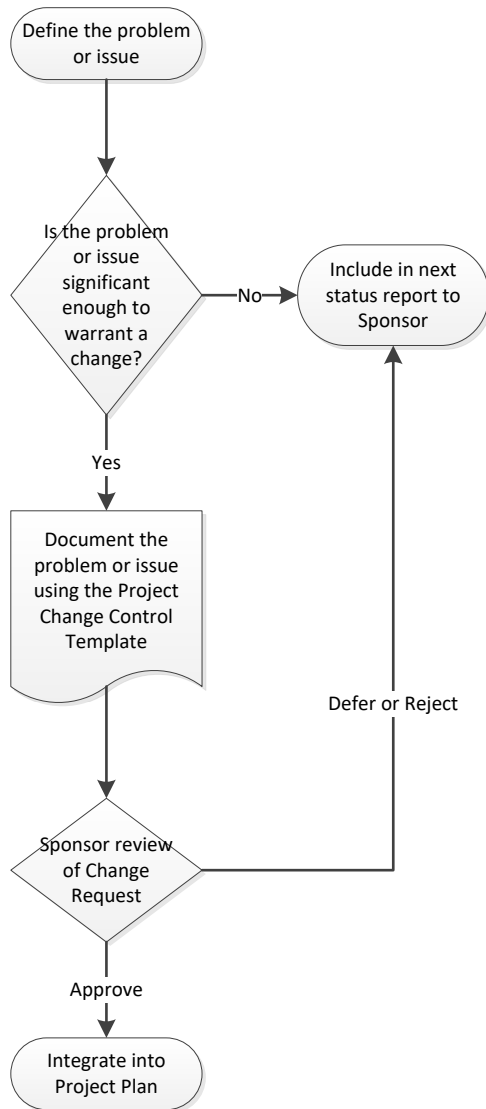
⇨ Define the problem or issue the project is experiencing. Attempt to identify the root cause of the issue, rather than the symptoms present.

⇨ Evaluate the costs and benefits for addressing the problem or issue, identify if it's worthwhile. If the change is not required at this time, include an update on the item in your next summary status report to the project sponsor.

⇨ Document the problem or issue using the Project Change Control Template

⇨ Review the project change request with the project sponsor and work together for a decision to accept, reject, or defer the change. If the change is rejected or deferred, be sure to recap the decision in the next summary status report.

⇨ Integrate into plan. If the change is accepted, modify the project plan and notify all project participants and begin performing all required planning.

Project Change Control Template

Change Category: Place an "X" in the box to the left of the appropriate change categories						
	Scope		Schedule		Budget	Resources

Summary Statement: Provide a brief summary of why this change is being requested.

Proposed Change: Briefly describe the problem or opportunity being addressed by this change request.

Impact of Not Implementing Change: Briefly describe the impact to the overall project of doing nothing.

Alternatives Considered: List alternatives that were considered and explain why they were not selected.

Project Changes: List the changes that will be made to the project (Scope, Schedule, Budget, Resources, Documentation, Deliverables, Etc.).

Decision: (Approved, Deferred, Rejected)

Project Change Control Example

Change Category: Place an "X" in the box to the left of the appropriate change categories							
	Scope	X	Schedule		Budget	X	Resources

Summary Statement: Provide a brief summary of why this change is being requested.
Subject matter expert (SME) George Washington is responsible for many project tasks throughout the life of the project. George has knowledge and experience that no other project resource has. George has accepted a new position and has two weeks remaining in his current role.

Proposed Change: Briefly describe the problem or opportunity being addressed by this change request.
The project team is requesting a replacement resource with similar knowledge and experience as George. Additionally, pause on all impacted project tasks for a knowledge transfer and project familiarization period for the new resource. The project schedule is anticipated to extend for two weeks for the knowledge transfer, one week for the familiarization period, and an additional two weeks as the tasks that would be completed by George will now take longer with the new resource. The total project extension requested is 5 weeks.

Impact of Not Implementing Change: Briefly describe the impact to the overall project of doing nothing.
Not implementing the change will result in the project schedule falling behind as John Adams will be required to independently complete all of the shared tasks he would be working with George on. These tasks are anticipated to double in duration. Additionally, the GAP analysis task that would be completed by George no longer has a resource. Another resource (John) would likely need to accept this task. The project is expected to require an additional 8 weeks

Alternatives Considered: List alternatives that were considered and explain why they were not selected.
Utilize John Adams to complete the workload of George Washington. Detailed analysis revealed that this option would take 3 weeks longer than the recommended option to bring in another resource. The work would be complete less effectively, due to the lack of experience performing said work.

Project Changes: List the changes that will be made to the project (Scope, Schedule, Budget, Resources, Documentation, Deliverables, Etc.).
The project schedule would extend by 5 weeks, pushing the planned completion date to December 2012 from October 2010. George Washington will be replaced by an undetermined resource.

Decision: (Approved, Deferred, Rejected)

Project Management Process

INITIATION	Step	Deliverable(s)
	1. Define the Project	Project Definition Documentation
	2. Establish Project Structure	Team Operating Agreement Communication Plan

PLANNING		
	3. Generate Tasks	Work Breakdown Structure Task Descriptions
	4. Determine Roles & Responsibilities and Develop Estimates	Responsibility Matrix Effort & Duration Estimates
	5. Define Task Interdependencies and Develop Schedule	Project Network Gantt (Schedule) Chart
	6. Develop Risk Management Plan	Preventive and Contingency Plans

CONTROL		
	7. Track and Manage the Project	Status Reports, Action Plans, Status Meetings

CLOSE-OUT		
	8. Perform Post-Project Review	Project History Documentation

Perform Post-Project Review

┌─────────────────────────────────────┐
Project Close-Out Process

- **Collect final actuals**
- **Conduct post-project review meeting**
- **Document and store project history**
└─────────────────────────────────────┘

Description

This final step in the Project Management Process occurs in the Close-Out phase and wraps up everything that has gone before. The post-project review is an audit during which the project team evaluates the project as objectively as possible. The end result of the review is documentation that provides a final project accounting to management, and creates project history as an aid to future project teams.

Process

⇨ **Collect final actuals**. The team must gather as much information as possible, including history collected during the project, final schedule and budget, quality indicators, and other information relevant to the project. (NOTE: This is not a review of the product.)

⇨ **Conduct post-project review meeting**. The purpose of the meeting is to conduct an objective evaluation of the project. Therefore, the project manager must position the meeting as an opportunity for participants to expand their learning from the project experience, rather than as a blame session.

Recommendations:

➔ Schedule the meeting soon after the project.
➔ Distribute an agenda and discussion questions prior to the meeting.
➔ Document ideas generated in the meeting.

⇨ **Document and store project history**. The post-project review meeting should provide information needed for final project reports to management. It should also result in documentation that can probe valuable for future project teams. Teams should decide which information will be most pertinent in the future, the format in which the information will best be saved, and where it will be stored.

Guidelines

☑   Establish a clear purpose for the meeting: to finalize the project and to support learning.

☑   At the meeting, list actions or practices worth repeating the next time and describe what you would do differently.

☑   Use a facilitator to help keep the meeting focused on learning, not on blame.

Questions for a Post-Project Review Meeting

Product Requirements:

- When the project was complete, did the project deliverable meet user requirements without additional work?

- If additional work was required, describe it. Why was extra work needed?

Post–Project Review Question Topics
Product Requirements   **Schedule**   **Tracking and Control**   **Team Issues**   **Managing Relationships**   **General Questions**

- Did requirements change during the project? How did you manage change? How would you manage change on the next project?

- What did you learn about developing and writing projects requirements that will help you on the next project?

  (NOTE: A more detailed product review may be held 30, 60, or 90 days after the post-project review.)

Schedule:

- How close to scheduled completion was the project actually completed?

- What factors enabled the team to stay on schedule?

- What factors caused delays?

- Overall, what did you learn about scheduling on this project that will help you on the next project?

Project Tracking and Control:

- What did you learn about tracking performance that will help you on the next project?

- What did you learn about taking corrective action that will help you on your next project?

Team Issues:

- What did you learn about staffing that will help you on the next project?

- What worked or didn't work about team communication? In other words, did you have adequate methods for keeping each other informed?

- What worked or didn't work about how work was distributed? Did you have the right skill mix? Was work assigned to the best person for the job? Did everyone clearly understand roles and responsibility so that work was completed without duplication omissions?

Managing Relationships:

- What lessons did you learn about managing the working relationship with your client?

- What lessons did you learn about managing working relationships with other departments or divisions?

- What lessons did you learn managing working relationships with outside vendors or contractors?

General Questions:

- What technological advances were made on this project? What did you learn that could be used on future projects?

- What project planning techniques were most useful on this project? Did you use project management software? What did you learn that would help you on the next project?

- What techniques or systems did you develop for this project that could be used on other projects?

- List any recommendations you have for future development.

- If you could do the project over, what would you do differently?

Analyze Critical Path - Answer Sheet

Project Management System Implementation

LEGEND:

ES		EF
	TASK	
LS		LF
Duration	Float	

Float = LF - EF

T_E = 10 weeks

T_E = Completion Time: Time of the longest (critical) path

Network diagram nodes:

- START → A1 (ES 0, EF 1.0, LS 0, LF 1.0, Duration 1.0, Float 0)
- A1 → B1 (ES 1.0, EF 3.5, LS 1.0, LF 3.5, Duration 2.5, Float 0)
- B1 → C1 (ES 3.5, EF 5.5, LS 5.0, LF 7.0, Duration 2.0, Float 1.5)
- B1 → C2 (ES 3.5, EF 5.0, LS 6.0, LF 7.5, Duration 1.5, Float 2.5)
- B1 → C3 (ES 3.5, EF 7.5, LS 3.5, LF 7.5, Duration 4.0, Float 0)
- C1 → D1 (ES 5.5, EF 7.0, LS 7.0, LF 8.5, Duration 1.5, Float 1.5)
- C2 → D2 (ES 5.0, EF 6.0, LS 7.5, LF 8.5, Duration 1.0, Float 2.5)
- C3 → D3 (ES 7.5, EF 8.5, LS 7.5, LF 8.5, Duration 1.0, Float 0)
- D → E1 (ES 8.5, EF 10.0, LS 8.5, LF 10.0, Duration 1.5, Float 0)
- D → E2 (ES 8.5, EF 9.0, LS 9.5, LF 10.0, Duration 0.5, Float 1.0)
- E → END

CA - Project Management Methodology
Status Reports

Project Name:
OCIO Project #: _____
Department: _____

Click on the section that you would like to complete.

<div style="background-color: yellow;">Team Member to PM (for internal project use only)</div>

<div style="background-color: yellow;">Executive Project Status Report</div>

<div style="background-color: yellow;">Cost Tracking</div>

<div style="background-color: yellow;">Milestone Tracking</div>

4.3 Project Status Report Instructions

This report is used on a weekly basis by team members to document their activities and identify any outstanding issues that require the team's attention. This report is intended for internal project/state agency use only and is not submitted to the Department of Technology. The template includes the following information:

- Task or Deliverable – the name of the task or deliverable that is being reported on.
- Scheduled Completion Date – the last approved scheduled completion date.
- Actual Completion Date – the date the task or deliverable is actually completed.
- Issues – describe any open issues regarding this task or deliverable (unanswered questions, differences of opinion, etc.).
- Accomplished This Week – describe any significant work or pieces of work that were done.
- Planned/Scheduled Completion in Next Two Weeks – describe the tasks or deliverables that are scheduled to be completed in the next two weeks.
- Status Summary – provide a yes or no response and an explanation for all "no" responses.
    - Will all assigned tasks be accomplished by their due date?
    - Are there any planned tasks that won't be completed?
    - Are there problems which affect your ability to accomplish assigned tasks?
    - Do you plan to take time off that is not currently scheduled?
- Status of Assigned Issues
    - Issue Number – unique identification number from the Issue Log
    - Description – provide a brief description of the issue
    - Due Date – provide the date that resolution needs to be in place
    - Status – describe what has been done to resolve the issue thus far

California Department of Technology
SIMM Section 45 IT Project Oversight Framework
45F Project Status Reports – Preparation Instructions

July 2016

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CA-PMM

Project Name: _____

OCIO Project #: _____
Department: _____
Reporting Period: *From:* _____ *To:* _____

Team Member to Project Manager

Current Task Summary

Task or Deliverable	Scheduled Completion Date	Actual Completion Date	Issues?

Accomplished this week

Planned/Scheduled Completion in Next Two Weeks

Status Summary	Yes/No	Explanation
Will all assigned tasks be accomplished by their due date?		
Are there any planned tasks that won't be completed?		
Are there problems which affect your ability to accomplish assigned tasks?		
Do you plan to take time off that is not currently scheduled?		

Status of Assigned Issues

Issue Number	Description	Due Date	Status

INTRODUCTION TO THE MEETING AGENDA
AND MEETING MINUTES TEMPLATE

Meetings are a very useful and effective way to develop communication and collaboration on a project team. To help facilitate meetings, agendas and minutes are useful tools to communicate purpose, participants, objectives, and decisions.

Preparing and distributing a meeting agenda has many benefits and makes the meeting more effective. These include ensuring participants are notified in advance of the meeting's agenda items, location, time, expected duration, invited participants, and remote access information (if applicable). The agenda may define an overall objective for the meeting including topics and action items to be discussed and who is responsible.

Completing meetings minutes can be equally important to having effective meetings. By documenting notes, action items, and decisions made, it ensures that all participants have the same understanding of the outcomes (or be able to react if they have a different understanding). It also can help hold the participants accountable for those outcomes and decisions.

Remember that it is important to complete and distribute both the agenda and the minutes to participants timely in order to be the most effective. Send agendas out a few days before the meeting, and complete the minutes and distribute as soon as possible so that any discussions that occurred during the meeting are still fresh on their minds.

The following sections are constructed to match the suggested structure for a project meeting agenda and project meeting minutes. Instructions and descriptions are provided to help in the development.

1   Introduction

Agendas

[The Project Meeting Agenda provides advance notice to meeting participants and other Stakeholders about the meeting's overall objectives, agenda/action items, location, time, expected duration, invited participants, and remote access information (if applicable). The agenda clearly and formally defines in advance the topics and action items to be discussed and acted upon, and who is responsible for each presentation. The agenda should be distributed well in advance of the meeting so that participants can familiarize themselves with the subject matter. In some cases, organizational or state policies may control how far in advance a meeting agenda must be published and distributed.]

Minutes

[Project Meeting Minutes concisely document the actions of the referenced project meeting. Once drafted, meeting minutes may be reviewed and approved by the meeting facilitator or presented to the next meeting of the same group/purpose for review, discussion, and approval.

A good practice is that the minutes should clearly document the decisions and action items from a meeting rather than try to capture all of the participants' discussions. Meeting minutes can make use of much of the information already gathered for the meeting agenda. However, the minutes should record the attendees who actually participated in the meeting either in person or remotely (as opposed to all of those invited to attend the meeting).

Minutes should also accurately record decisions and actions taken. This includes new and completed action items and their owners, and any other significant activities and discussion items. If no action is taken on a particular agenda item or an item is delayed until a future meeting, the minutes should reflect this.

The approved minutes can then be distributed to all meeting participants, project managers and other interested Stakeholders. Good minutes help coordinate and document project work and drive meeting action towards product completion.]

[Insert Meeting Title]

Date: [Day, Month Date, Year]   Location: [Address or Building and Floor of Meeting]

Time: [Start – End time]   Room: [Room name or number]

Conference Call Information:

[Meeting phone number, ID number, password and/or web link]

Meeting Objective/Purpose: [Insert overall objective(s)/goals of meeting]

Additional Resources: [Identify material distributed for review or other sources of information that will be useful in support of the meeting objective]

Facilitator: [Insert name]

Meeting Attendees:

Name	Organization/Title/Contractor/Team	Attendance
[Insert Name of Each Invitee]	[Insert organization, office and/ or name of project team/role the attendee represents]	[Enter "Y" for yes and "N" or no]
John Smith	*Project Management Office, Test Project, Scribe*	

Agenda Items				
Item #	**Topic**	**Owner/Presenter**	**Scheduled Time**	**Notes**
[Insert number]	[Insert name of agenda item topic/subject]	[Insert name]	[Insert scheduled beginning and end time for agenda item]	[Insert any notes captured during the meeting, including decisions made]
1	*Discussion/Approval of previous meeting's minutes*	*John Smith*	*10:00 – 10:05 a.m.*	
2	*Review open action items*	*Jane Doe*	*10:05 – 10:15 a.m.*	

Action Items					
Item #	**Description**	**Date Assigned**	**Owner**	**Target Completion Date/Completion Date**	**Status**
[Insert no.]	[Insert brief name/description of action item]	[Insert Date the action item was identified/ assigned]	[Insert the name of the person assigned to complete the action item]	[Insert completion/ completion target date]	[State whether it is open or closed]
8	*Complete test scripts #10A and 10B*	*10/22/2016*	*Mark West*	*Action item to be completed 11/14/2016*	*Open*

Schedule of Future Meetings (Subject to Change)			
Date	**Time**	**Location**	**Tentative Goal/Objectives**
[Insert date of scheduled meeting = xx/xx/xxxx]	[Insert time of schedule meeting]	[Insert expected location and/or room of scheduled meeting]	[List the goals/objects tentatively planned for the scheduled meeting]

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Melissa Fish 916.484.8061
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