

## 4 PROJECT EXECUTION AND CONTROL

The purpose of Project Execution and Control is to develop the product or service that the project was commissioned to deliver. Typically, this is the longest phase of the project management lifecycle, where most resources are applied.

Project Execution and Control utilizes all the plans, schedules, procedures and templates that were prepared and anticipated during prior phases. Unanticipated events and situations will inevitably be encountered, and the Project Manager and Project Team will be taxed to capacity to deal with them while minimizing impact on the project's CSSQ.

The conclusion of the phase arrives when the product of the project is fully developed, tested, accepted, implemented and transitioned to the Performing Organization.

Accurate records need to be kept throughout this phase. They serve as input to the final phase, Project Closeout.

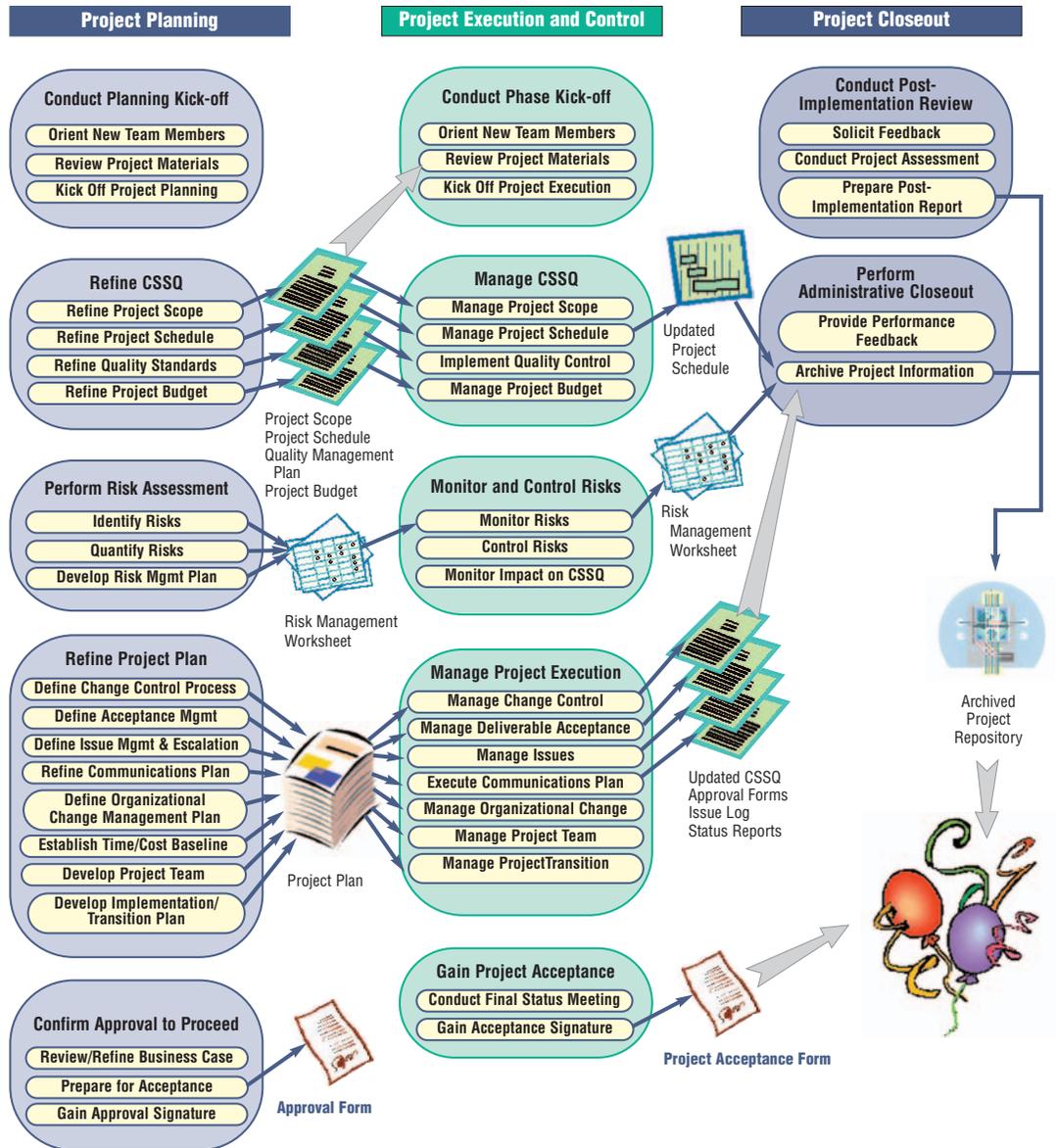
This phase consists of the following processes:

- ◆ **Conduct Project Execution and Control Kick-off**, where the Project Manager conducts a meeting to formally begin the Project Execution and Control phase, orient new Project Team members, and review the documentation and current status of the project.
- ◆ **Manage CSSQ**, where the Project Manager must manage changes to the Project Scope and Project Schedule, implement Quality Assurance and Quality Control processes according to the Quality Standards, and control and manage costs as established in the Project Budget.
- ◆ **Monitor and Control Risks**, where the Project Manager and Project Team utilize the Risk Management Plan prepared in previous phases, and develop and apply new response and resolution strategies to unexpected eventualities.

- ◆ **Manage Project Execution**, where the Project Manager must manage every aspect of the Project Plan to ensure that all the work of the project is being performed correctly and on time.
- ◆ **Gain Project Acceptance**, where the Project Manager, Customer Decision-Makers and Project Sponsor acknowledge that all deliverables produced during Project Execution and Control have been completed, tested, accepted and approved, and that the product or service of the project has been successfully transitioned to the Performing Organization.

The following chart illustrates all of the processes, tasks, and deliverables of this phase in the context of the project management lifecycle.

Figure 4-1



The following roles are involved in carrying out the processes of this phase. The detailed descriptions of these roles can be found in the Section I Introduction.

- ◆ Project Manager
- ◆ Project Sponsor
- ◆ Project Team Member
- ◆ Customer
- ◆ Customer Representative
- ◆ Consumer
- ◆ Stakeholders

Project Execution and Control differs from all other phases in that, between phase kick-off and project acceptance, all processes and tasks occur concurrently and repeatedly, and continue almost the entire duration of the phase.

Thus, the earlier concept of a “process deliverable” is not applicable to this phase, and even task deliverables are mostly activities, not products.

Of course, there is the ultimate phase deliverable – the product of the project, and it is formally recognized via the signed Project Approval Form.

The following table lists all Project Execution and Control processes, tasks and their deliverables.

Figure 4-2

Processes	Tasks	Task Deliverables (Outcomes)
Conduct Project Execution and Control Kick-off	Orient New Team Members	Team Members Prepared to Work
	Review Outputs of Project Planning	Project Planning Outputs Reviewed
	Kick Off Project Execution and Control	Kick-off Meeting Agenda Kick-off Meeting Notes
Manage CSSQ	Manage Project Scope	Scope Under Control
	Manage Project Schedule	Updated Project Schedule
	Implement Quality Control	Quality Control Processes In Place
	Manage Project Budget	Updated Budget
Monitor and Control Risks	Monitor Risks	Risk Management Worksheet
	Control Risks	Project Status Report
	Monitor Impact on CSSQ	CSSQ Managed
Manage Project Execution	Manage Change Control Process	Updated CSSQ
	Manage Acceptance of Deliverables	Project Deliverable Approval Forms
	Manage Issues	Project Status Report
	Execute Communications Plan	Project Status Report and Other Communication Tools
	Manage Organizational Change	Organizational Change Processes Executed
	Manage the Project Team	High Performing Team
	Manage Project Implementation and Transition Plan	Product of the Project
Gain Project Acceptance	Conduct Final Status Meeting	Final Project Status Report
	Gain Acceptance Signature from Project Sponsor	Signed Project Acceptance Form

4.1 CONDUCT PROJECT EXECUTION AND CONTROL KICK-OFF

The purpose of Conduct Project Execution and Control Kick-off is to formally acknowledge the beginning of Project Execution and Control and facilitate the transition from Project Planning. Similar to Project Planning Kick-off, Project Execution and Control Kick-off ensures that the project is still on track and focused on the original business need. Many new team members will be introduced to the project at this point, and must be thoroughly oriented and prepared to begin work. Most importantly, current project status is reviewed and all prior deliverables are re-examined, giving all new team members a common reference point.

- | Roles                  |
|------------------------|
| ● Project Manager      |
| ● Project Sponsor      |
| ● Project Team Members |
| ● Stakeholders         |

4.1.1 Orient New Project Team Members

As in Project Planning, the goal of orienting new Project Team members is to enhance their abilities to contribute quickly and positively to the project's desired outcome. If the Project Manager created a Team Member Orientation Packet during

- The tasks executed in support of Conduct Project Execution and Control Kick-off are:
- 4.1.1 Orient New Project Team Members
  - 4.1.2 Review Outputs of Project Planning and Current Project Status
  - 4.1.3 Kick Off Project Execution and Control

Project Planning, the packet should already contain an orientation checklist, orientation meeting agenda, project materials, and logistical information that will again be useful.

The Project Manager should review the contents of the existing Team Member Orientation Packet to ensure that they are current and still applicable to the project. Any changes needed to the contents of the packet should be made at this time. Once updated, packet materials can be photocopied and distributed to new team members to facilitate their orientation process.

The Project Manager or Team Leader should conduct one-on-one orientation sessions with new members to ensure that they read and understand the information presented to them.

If the orientation packet was not created during Project Planning and new team members are coming on board, the Project Manager must gather and present information that would be useful to new team members, including:

- All relevant project information from Project Origination, Project Initiation, and Project Planning
- Organization charts – Project Team, Customer, Performing Organization
- Information on Project Roles and Responsibilities
- General information on the Customer (what they do for a living!)
- Logistics (parking policy, work hours, building/office security requirements, user id and password, dress code, location of rest rooms, supplies, photocopier, printer, fax, refreshments, etc.)
- Project procedures (team member expectations, how and when to report project time and status, sick time and vacation policy)

#### 4.1.2 Review Outputs of Project Planning and Current Project Status

Before formally beginning Project Execution and Control, the Project Team should review recent Project Status Reports and the Project Plan. At this point in the project, the Project Plan comprises all deliverables produced during Project Initiation and Project Planning:

1. Project Charter
2. CSSQ (Scope, Schedule, Quality Plan, Budget)
3. Risk Management Worksheet
4. Description of Stakeholder Involvement
5. Communications Plan
6. Time and Cost Baseline
7. Change Control Process
8. Acceptance Management Process
9. Issue Management and Escalation Process
10. Project Organizational Management Plan
11. Project Team Training Plan
12. Project Implementation and Transition Plan

See the sections on Project Initiation and Project Planning for detailed descriptions of these deliverables.

This will serve to remind the team of what has been produced so far, to clarify understanding of the work to be produced during Project Execution and Control, and to again communicate the management processes that will be followed during the remainder of the project.

### 4.1.3 Kick Off Project Execution and Control

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As was the case for Project Initiation and Project Planning, a meeting is conducted to kick off Project Execution and Control. During the meeting, the Project Manager should present the main components of the Project Plan for review. (See Figure 4-3, Project Execution and Control Kick-off Meeting Agenda.) Other items to cover during the meeting include:

- Introduction of new team members
- Roles and responsibilities of each team member
- Restating the objective(s) of the project and goals for Execution and Control
- Latest Project Schedule and timeline
- Communications Plan
- Project risks and mitigation plans
- Current project status, including open issues and action items

The goal of the kick-off meeting is to verify that all parties involved have consistent levels of understanding and acceptance of the work done so far, to validate expectations pertaining to the deliverables to be produced during Project Execution and Control, and to clarify and gain understanding of the expectations of each team member in producing the deliverables. Attendees at the Project Execution and Control Kick-off Meeting include the Project Manager, Project Team, Project Sponsor, and any other Stakeholders with a vested interest in the status of the project. This is an opportunity for the Project Sponsor to reinforce the importance of the project and how it supports the business need.

As at every formal project meeting, the Project Manager should be sure that one of the Project Team members in attendance is designated as the scribe for the session, to capture notes and action items. Following the session, the notes and action items should be compiled into meeting minutes to be distributed to all attendees for review and approval, and should be added to the project repository.

Figure 4-3 Project Execution and Control Kick-off Meeting Agenda

<h2 style="margin: 0;">Project Execution and Control Kick-off Meeting Agenda</h2>	Project: _____ Date: _____ Time: From: _____ To: _____ Location: _____	
<p><b>Invitees:</b> List the names of individuals invited to the meeting</p> <hr/> <p><i>Invitees should include the Project Manager, Project Team, Project Sponsor, and any Customers with a vested interest in the status of the project.</i></p> <hr/> <p><b>Attendees:</b> During the meeting, note who actually attended. If attendees arrived late or left early, indicating they missed some of the topics discussed, note their arrival or departure time.</p> <hr/>		
<b>AGENDA</b>		
<p><i>Use the following suggested times as guidelines—the time you need to cover agenda topics will vary depending upon the needs of the project.</i></p>		
	PRESENTER NAME	TIME (MINUTES)
Introductions	Project Manager	5 min.
<p><i>Project Manager welcomes everyone and briefly states the objective of the meeting. Allow individuals to introduce themselves, and provide a description of their role within the Performing Organization and their area of expertise and how they may be able to contribute to the project efforts.</i></p> <p><i>The material to be presented by the following agenda topics should come right from the Project Charter.</i></p>		
Sponsor's Statement	Project Sponsor	5 min.
<p><i>After brief introductions, the Project Sponsor should describe the vision for the project, demonstrate support, and advocate for its success, setting it as a priority for all parties involved.</i></p>		
Project Request & Background	Project Manager	5 min.
Project Goals & Objectives	Project Manager	10 min.
Project Scope	Project Manager	10 min.
Roles & Responsibilities	Project Manager	10 min.
<p><i>When reviewing roles and responsibilities be explicit about expectations relative to stakeholder availability and Project Sponsor commitment and support for the project.</i></p>		
Next Steps	Project Manager	5 min.
Questions	Project Manager	10 min.
<b>ADDITIONAL INFORMATION:</b>		
Handouts:	_____	
<p><i>Provide a list of the material to be distributed to the attendees.</i></p> <hr/>		

Figure 4-3 (Continued)

<p><b>Project Execution and Control Kick-off Meeting</b></p>	<p>Project:  Date:  Time: From: _____ To: _____ Location: _____</p>												
<p><i>Be sure that one of the Project Team members in attendance is scribing for the session, capturing important project-specific information that requires further review or discussion as well as potential issues that could impact the project. At the end of the meeting, the Project Manager and Project Team should review these points as well as any other notes captured by other team members to identify any additional actions required. The notes will be compiled into meeting minutes to be distributed to all the attendees and retained in the project repository.</i></p>													
<b>DECISIONS</b>													
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<p><i>Document each project decision reached and its impact. Also indicate if the decision requires follow-up actions. If so, these should be captured below.</i></p>													
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<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Action</th> <th style="width: 25%;">Responsible</th> <th style="width: 25%;">Target Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		Action	Responsible	Target Date									
Action	Responsible	Target Date											
<p><i>Capture any follow up activities and the individual responsible for them as well as set a date as to when the action needs/should be completed.</i></p> <p><i>At the end of the meeting, the scribe should recap the action items. These should also be included in the meeting minutes to be distributed.</i></p>													

## 4.2 MANAGE CSSQ

CSSQ is the acronym for a project's inextricably linked quadruple constraints: Cost, Scope, Schedule, and Quality. During Project Planning, each section of the CSSQ was refined. As project-specific tasks are performed during Project Execution and Control, CSSQ will need to be managed according to the processes established during Project Planning.

### Roles

- Project Manager
- Project Sponsor
- Project Team Member
- Customer Representative

The CSSQ is not static – although Project Planning is complete and has been approved, some components of CSSQ will continue to evolve as a result of the execution of project tasks. Throughout Execution and Control, as more information about the project becomes known and the product of the project is developed, CSSQ is likely to be affected and will need to be closely managed.

The purpose of **Manage CSSQ** is to:

- Manage Changes to Project Scope
- Control the Project Schedule and Manage Schedule Changes
- Implement Quality Assurance and Quality Control Processes according to the Quality Standards Revised During Project Planning
- Control and Manage Costs Established in the Project Budget

### 4.2.1 Manage Project Scope

During Project Planning, the Project Manager, through regular communication with the Customer Representatives and Project Sponsor, refined the Project Scope to clearly define the content of the deliverables to be produced during Project Execution and Control. This definition includes a clear description of what will and will not be included in each deliverable.

**The tasks for Manage CSSQ are:**

- 4.2.1 Manage Project Scope
- 4.2.2 Manage Project Schedule
- 4.2.3 Implement Quality Control
- 4.2.4 Manage Project Budget

The process to be used to document changes to the Project Scope was included in the Project Plan. This process includes a description of the way scope will be managed and how changes to scope will be handled. It is important that the Project Manager enforce this process throughout the entire project, starting very early in Project Execution and Control. Even if a scope change is perceived to be very small, exercising the change process ensures that all parties agree to the change and understand its potential impact. Following the process each and every time scope change occurs will minimize confusion as to what actually constitutes a change. Additionally, instituting the process early will test its effectiveness, get the Customer and Project Sponsor accustomed to the way change will be managed throughout the remainder of the project, and help them understand their roles as they relate to change.

As part of managing scope change, one of the Project Manager's functions is to ensure that the project produces all the work but ONLY the work required and documented in the Project Scope. Any deviation to what appears in the scope document is considered change and must be handled using the change control process. Sometimes, despite the best effort of the Project Manager to carefully document what is in and outside of scope, there is disagreement between the Project Manager and Customer Representative or Project Sponsor regarding whether something is a change. When conflicts occur, the Project Manager and appropriate Customer must be willing to discuss their differences of opinion and reach a compromise. If a compromise cannot be reached, it may be necessary to escalate the issue to a higher level of management.

Once the Project Manager, the Project Sponsor, and the appropriate Customer Representative agree that scope change is occurring, they all must take the time to thoroughly evaluate the change. In order to effectively evaluate change, the Project Manager must forecast the impact of the change on the remaining three "quadruple constraints": Cost, Schedule and Quality. Equipped with this information, the Project Manager and Project Sponsor will be able to determine if implementing the proposed change would be beneficial. If it is determined, for

example, that the cost of implementing a change outweighs the benefit, the change should most likely be rejected or put aside for future consideration.

When a scope change is determined to be beneficial to the outcome of the project, approval and funding for the change is secured. At this point, the Project Manager must follow the procedures defined in the Project Plan to implement the change. (Managing the change control process is described in detail in 4.4.1.)

The Project Manager must incorporate any agreed-upon changes or addenda into the deliverables produced during Project Initiation and Project Planning. This ensures that all project deliverables are in line with the revised Project Scope. Any lessons learned from scope change control should be documented and included in the project repository for later use by the current project and any other projects to be performed by the organization.

Throughout Project Execution and Control, continuous communication between the Project Manager, Project Sponsor, and Customer Representative is crucial in managing scope.

#### 4.2.2 Manage Project Schedule

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During Project Planning, an agreed-upon baseline was established for the Project Schedule. This baseline will be used as a starting point against which performance on the project will be measured. It is one of many tools the Project Manager can use during Project Execution and Control to determine if the project is on track.

Project Team members must use the communications mechanisms documented in the Communications Plan to provide feedback to the Project Manager on their progress. It is recommended that each team member prepare a Progress Report. This report documents effort spent on tasks and provides estimates of the effort required to complete them. (See Figure 4-4, the New York State Progress Report.) Progress Reports are used by the Project Manager to update the Project Schedule. For details on the contents of a Progress Report and instructions on how to prepare one, see 4.4.4, Execute Communications Plan.

The Project Manager must emphasize to the team the importance of accurate reporting, and must be vigilant in collecting information at a detailed level. Using the information contained in the Progress Reports, the Project Manager tracks work done against the tasks in the Project Schedule. If the time remaining to complete a task in the schedule differs from the estimated time, the schedule should be updated accordingly. It is recommended that the Project Manager update the Project Schedule on a regular basis. Frequent updates to the schedule not only save time in the long run, they also allow the Project Manager to quickly spot potential problem areas. Small slippages on individual tasks may combine to create significant issues with other, dependent tasks.

Figure 4-4 Progress Report

Progress Report					
To:			Report Period Ending:		
From:			Project Name:		
The tasks I completed this reporting period are:					
■					
The tasks I plan to complete next reporting period are:					
■					
I lost time due to: (Specify hours and cause):					
■					
Issues:					
Description	Date Identified	Impact			
Scheduled Vacation/Training:					
Description	Start Date	End Date	# of Hours		
Time Reporting by Task:					
Task ID	Description	Original Estimate	Hours this Week	ETC	Hours to Date
	Reporting Period Total				

After updating the Project Schedule, the Project Manager must take the time to review the status of the project. Some questions that the Project Manager should be able to answer by examining the Project Schedule include:

- Is the project on track?
- Are there any issues that are becoming evident that need to be addressed now?
- Which tasks are taking more time than estimated? Less time?
- If a task is late, what is the effect on subsequent tasks?
- What is the next deliverable to be produced and when is it scheduled to be complete?
- What is the amount of effort expended so far and how much is remaining?
- Are any Project Team members over-allocated or under-allocated?
- How much of the time allocated has been expended to date and what is the time required to complete the project?

Most project scheduling tools provide the ability to produce reports to display a variety of useful information. It is recommended that the Project Manager experiment with all available reports to find those that are most useful for reporting information to the Project Team, Customer, and Project Sponsor.

When updating the Project Schedule, it is very important that the Project Manager maintain the integrity of the current schedule. Each version of the schedule should be archived. By creating a new copy of the schedule whenever it is updated, the Project Manager will never lose the running history of the project and will also have a copy of every schedule for audit purposes.

The Project Manager should begin tracking actual work in the Project Schedule as soon as the work commences, which is usually as soon as the project is initiated and Project Planning begins. Work done in parallel with planning, before the Project Schedule is completed and approved, must be recorded. Remember that updates to the Project Schedule are not limited to tracking hours worked – ANY change resulting from the execution of the change control process will usually require future tasks to be re-planned and the schedule to be updated! (See Manage Change Control Process, task 4.4.1.) If the Project Schedule is updated to reflect approved change control, a new

baseline schedule must also be created. Updates must then be made against the new baseline. The previous baseline should be saved for historical purposes.

### 4.2.3 Implement Quality Control

Quality control involves monitoring the project and its progress to determine if the quality assurance activities defined during Project Planning are being implemented and whether the results meet the quality standards defined during Project Initiation. The entire organization has responsibilities relating to quality, but the primary responsibility for ensuring that the project follows its defined quality procedures ultimately belongs to the Project Manager. The following figure highlights the potential results of executing a project with poor quality compared to a project executed with high quality:

Figure 4-5

Poor Quality	High Quality
Increased costs	Lower costs
Low morale	Happy, productive Project Team
Low Customer satisfaction	Delivery of what the Customer wants
Increased risk	Lower risk

Quality control should be performed throughout the course of the project. Some of the activities and processes that can be used to monitor the quality of deliverables, determine if project results comply with quality standards, and identify ways to improve unsatisfactory performance, are described below. The Project Manager and Project Sponsor should decide which are best to implement in their specific project environment.

- **Conduct Peer Reviews** – the goal of a peer review is to identify and remove quality issues from a deliverable as early and as efficiently as possible. A peer review is a thorough review of a specific deliverable, conducted by members of the Project Team who are the day-to-day peers of the individuals who produced the work. The peer review process adds time to the overall Project Schedule, but in many project situations the benefits of conducting a review far outweigh the time considerations. The Project Manager must evaluate the needs of his/her project, determine and document which, if any, deliverables should follow this process, and build the required time and resources into the Project Schedule.

Prior to conducting a peer review, a Project Team member should be identified as the facilitator or person responsible for keeping the review on track. The facilitator should distribute all relevant information pertaining to the deliverable to all participants in advance of the meeting to prepare them to participate effectively.

During the meeting, the facilitator should record information including:

- ▲ Peer review date
- ▲ Names and roles of participants
- ▲ The name of the deliverable being reviewed
- ▲ Number of quality issues found
- ▲ Description of each quality issue found
- ▲ Actions to follow to correct the quality issues prior to presenting the deliverable to the approver
- ▲ Names of the individuals responsible for correcting the quality issues
- ▲ The date by which quality issues must be corrected

This information should be distributed to the Project Manager, all meeting participants, and those individuals not involved in the meeting who will be responsible for correcting any problems discovered or for producing similar deliverables. The facilitator should also solicit input from the meeting participants to determine if another peer review is necessary. Once the quality issues have been corrected and the Project Manager is confident the deliverable meets expectations, it may be presented to the approver.

- **Use Quality Checklists** – both the Project Manager and Project Team members can create and make use of various checklists to be sure items are not overlooked while a product is being developed. Checklists may be simple hard-copy lists of “things to do,” or may be generated using more formal, electronic-based tools. In either case, a checklist should be comprehensive and detailed enough to ensure that the resulting product or deliverable has been built to the level required to meet quality standards. An example of a quality checklist is the End-of-Phase Checklist found at the end of each project management lifecycle phase in this *Guidebook*.



Checklists can be refined and expanded over the course of several projects. This is a great way to reuse best practices and maintain historical information.

- **Maintain and Analyze the Project Schedule** – this activity should never be taken lightly, regardless of the size of the project. Updating the Project Schedule on a regular basis while keeping a close watch on the timeline and budget is the primary mechanism to measure quality of the schedule. If the project timeline or budget are not on track, the Project Manager can determine why and take immediate action to remedy the problem. (See Manage Project Schedule, task 4.4.2.)
- **Conduct Project Audits** – the goal of a project audit is to ensure that the Quality Assurance activities defined in Project Planning are being implemented and to determine whether quality standards are being met. It is a process to note what is being done well, to identify real or potential issues, and to suggest ways for improvement. Audits should be performed on a regular basis, depending upon the size and length of the project. At a minimum, it is recommended that an audit be performed at the end of each phase, at least once during Project Execution and Control, and at the end of the project.

The individual(s) performing the audit can be a member of a quality assurance department or team, if one exists, or any Stakeholder determined by the Project Sponsor to be unbiased toward the project. The individual should also be very familiar with the quality standards and procedures in place in the Performing Organization, but should have no involvement in day-to-day project activities.

An auditor will most likely use a checklist questionnaire to interview the Project Manager, selected Project Team members, the Project Sponsor, and selected Customer Representatives to gain insight into how the project is progressing. One of the most important measurements the auditor will look for during these interviews is Project Team and Customer satisfaction. Poor satisfaction is an indicator of an underlying problem that should be uncovered as the auditor delves into the specifics of the project. In addition, the project repository will be examined to determine if it

contains sufficient documentation. An auditor will look for and review the components of the current Project Plan – including the Project Scope, Project Schedule, and Risk Management Worksheet. The questions listed below are examples of what an auditor may be asking when reviewing the Project Plan.

#### PROJECT DELIVERABLES

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(Project deliverables will differ depending upon the project lifecycle being used. Customize the following questions and add others as necessary to properly and sufficiently evaluate the deliverables specific to your project.)

Do the deliverables meet the needs of the Performing Organization?

Do the deliverables meet the objectives and goals outlined in the Business Case?

Do the deliverables achieve the quality standards defined in the Quality Management Plan?

#### PROJECT MANAGEMENT DELIVERABLES

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Does the Project Proposal define the business need the project will address, and how the project's product will support the organization's strategic plan?

Does the Business Case provide an analysis of the costs and benefits of the project and provide a compelling case for the project?

Has a Project Repository been established to store all project documents, and has it been made available to the Project Team?

Does the Project Charter define the project purpose, goals and objectives?

Does the Project Scope provide a description of the project, including its output, approach, and content?

In the Project Scope, is it clear as to what is "in" and "out" of scope?

Is the Project Schedule defined sufficiently to enable the Project Manager to manage task execution?

Was a Project Schedule baseline established?

Is the Project Schedule maintained on a regular basis?

Does the Quality Management Plan describe quality standards for the project and associated quality assurance and quality control activities?

Has a project budget been established and documented in sufficient detail?

Have project risks been identified and prioritized, and has a mitigation plan been developed and documented for each?

If any risk events have occurred to date, was the risk mitigation plan executed successfully?

Are all Stakeholders aware of their involvement in the project, and has this it been documented and stored in the project repository?

Does the Communications Plan describe the frequency and method of communications for all Stakeholders involved in the project?

Does the Change Control Process describe how to identify change, what individuals may request a change, and the process to follow to approve or reject a request for change?

Has changes to scope been successfully managed so far?

Does the Acceptance Management Process clearly define who is responsible for reviewing and approving project and project management deliverables? Does it describe the process to follow to accept or reject deliverables?

Has the Acceptance Management Process proven successful for the deliverables produced so far?

Does the Issue Management and Escalation Plan clearly define how issues will be captured, tracked, and prioritized? Does it define the procedure to follow should an unresolved issue need to be escalated?

Have issues been successfully managed up to this point?

Does the Organizational Change Management Plan document how changes to people, existing business processes, and culture will be handled?

Has a Project Team Training Plan been established, and is it being implemented?

Does the Implementation and Transition Plan describe how to ensure that all Consumers are prepared to use the project's product, and the Performing Organization is prepared to support the product?

Have all Project Management deliverables been approved by the Project Sponsor (or designated approver?)

Does the Project Plan contain all required components as listed in the Guidebook?

Are each of the Project Plan components being maintained on a regular basis?

#### PROJECT MANAGEMENT PROCESSES

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Does each Project Team member produce regular progress reports, including actual effort expended on tasks and estimates to complete them?

Are regular Project Team meetings conducted? Are meeting minutes kept, disseminated after the meetings, and stored in the repository?

Does the Project Manager produce a status report on a regular basis that contains all recommended components from the Project Status Report template (Figure 2-10)?

Is the Project Status Report being reviewed with the Project Sponsor on a regular basis?

As new team members are introduced, are they being sufficiently oriented to the project and working environment?

#### PROJECT TEAM AND CUSTOMER SATISFACTION

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(To be completed only if Project Team members and Customers have been interviewed as part of this review)

Are Project Team members satisfied with the way the project is being managed?

Do Project Team members feel challenged and excited about their work?

Do Project Team members feel comfortable in voicing concerns or issues to the Project Manager?

Do the Project Manager, Project Sponsor and Customer Decision-Maker(s) share a consistent view of project status and issues?

Is the Customer Decision-Maker(s) satisfied with deliverables provided by the project?

Is the Customer Decision-Maker(s) satisfied with the responsiveness and flexibility of the Project Team?

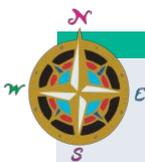
Is the Customer Decision-Maker(s) satisfied with the skills and capabilities of the Project Team?

Is the project currently free from serious Customer issues or concerns?

Upon completion of the audit and repository review, the auditor writes a summary report documenting his/her findings and recommendations. This report is reviewed with the Project Manager, who should immediately implement recommendations and corrective actions identified.

Every member of the Project Team must be committed to producing a quality product. Quality control cannot rely on “adding” quality at the end of a process; quality must be built into the work of each individual on the team. It is far more cost effective to have Project Team members add quality into their day-to-day jobs than to have an auditor find a problem after a process has been completed.

As a result of implementing quality control, the Project Manager should be able to determine and take the appropriate actions to increase the project’s effectiveness and provide better service to the Customer.



Successful quality control processes always strive to see quality through the eyes of the Customer. The Customer is the ultimate judge of the quality of the product.

#### 4.2.4 Manage Project Budget

The Project Manager must know the extent of his/her authority to make budget decisions. For example, is the Project Manager allowed to authorize work that requires additional hours of salaried personnel time, or must employee time extensions go through the same approval process as contract personnel or equipment purchases? Often, the Project Manager must work closely with fiscal and contract personnel in other divisions to track and control costs. These relationships must be established early in the project management lifecycle.

Part of the Project Manager's job is to ensure that the project is completed within the allocated and approved budget. Budget management is concerned with all costs associated with the project, including the cost of human resources, equipment, travel, materials and supplies. Increased costs of materials, supplies, and human resources, therefore, have a direct impact on the budget. Just as task duration estimates are tracked carefully against actuals, the actual costs must be tracked against estimates. The same analysis should be conducted and the same questions asked: What other aspects of the budget were constructed based upon these estimates? Changes to the scope of the project will most often have a direct impact on the budget. Just as scope changes need to be controlled and managed, so do changes to the Project Budget.

It is the responsibility of the Project Manager to closely monitor the financial performance of the project and take responsibility for addressing cost-related issues as they arise. In addition, the Project Manager should always be aware of the effect his/her decisions may have on the total cost of the project, both before and after the product or service is implemented.



Monitoring the financial performance of your project on a regular basis is the only way you can keep a handle on the Project Budget. Don't let the Project Budget get away from you – get into the habit of updating the schedule and analyzing the financial impact on a regular basis. Taking the time to do these administrative tasks will save you countless hours of reconciliation and balancing down the road, and warn you of impending cost issues!

There are several financial characteristics the Project Manager should monitor to determine if a project is performing satisfactorily against its budget. Most often, these values are entered into the scheduling tool by the Project Manager and calculated and displayed using its corresponding capabilities. Some budget-related characteristics the Project Manager should examine each time the schedule is updated include:

- **Original Contract Value:** the original estimated budget (cost) that was approved by the Project Sponsor.
- **Total Approved Changes:** the total cost of approved changes as a result of change control.
- **Total Current Budget:** the sum of the Original Contract Value and the Total Approved Changes. This is the most current approved Project Budget.
- **Cost to Date:** the actual dollars (cost) expended to date on all tasks and materials in the Project. The labor costs can be calculated by the scheduling tool based upon the time the Project Manager tracks against the tasks in the Project Schedule.
- **Estimate to Complete:** the dollars (cost) estimated to be expended to complete remaining project tasks. The Project Manager must verify and assess the impact of team members' revised effort estimates to complete tasks. The Project Manager must also validate that the remaining material costs are in line with the budget. These have a direct effect on the Project Budget.
- **Forecast Total:** the sum of the Cost to Date and the Estimate to Complete.
- **Project Variance:** the difference between all estimated and all actual dollars. It is calculated by subtracting the Forecast Total from the Total Current Budget. A positive variance means that the actual cost of the product is less than the budgeted cost. A negative variance means that the actual cost of the product is greater than the budgeted cost.



It is of utmost importance for the Project Manager to take the time to analyze, understand, and document the reason for variance every time the Project Schedule is updated.

Whether positive or negative, the Project Manager needs to understand what is causing variance and take proactive steps to keep it under control. The Project Manager must be able to explain the cause of variance to others and determine if corrective actions need to be taken to maintain the project's budget. For example, if a negative effort variance develops while a task is being executed, then more money may be needed than originally planned for, potentially impacting the success of the project. On the other hand, some tasks may finish ahead of schedule, freeing up money and offsetting the negative impact of those that finish late. The Project Manager must remain aware of such situations, working with the Project Team members and Customers to determine the causes of variance and to mitigate any associated risks.

It is the responsibility of the Project Manager to ensure the currency, accuracy, and viability of the Project Schedule as the primary mechanism for managing the budget. He/she must know and be able to communicate exact project status relative to budget, impact of changes, estimates to complete, and variance. This information must be known by task, process, phase, resource, and deliverable and be communicated to the Project Sponsor as part of the Status Meeting.

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- ◆ **The CSSQ Deliverables** – the Project Budget, Project Scope, Project Schedule, and the Quality Management Plan are applied, monitored and updated during Project Execution and Control.

## 4.3 MONITOR AND CONTROL RISKS

### Roles

- Project Manager
- Project Sponsor
- Project Team Member
- Customer

Risks are potential future events that can adversely affect a project's Cost, Schedule, Scope or Quality (CSSQ). In prior phases, the Project Manager defined these events as accurately as possible, determined when they would impact the project, and developed a Risk Management Plan. As the impact dates draw closer, it is important to continue re-evaluating probability, impact, and timing of risks, as well as to identify additional risk factors and events.

When the risk event actually occurs, the risk (which is by definition a future, potential event) becomes an issue (which is by definition a current, definite condition) and issue monitoring and control takes over.

The purpose of **Monitor and Control Risks** is to deploy the Risk Management Plans prepared in prior phases to anticipate project challenges, and to develop and apply new response and resolution strategies to unexpected eventualities.

### 4.3.1 MONITOR RISKS

During Project Initiation and Planning, risks were remote events with uncertain probabilities of coming true. In Execution and Control, however, impact dates draw closer, and risks become much more tangible.

#### The tasks for Monitor and Control Risks during Project Execution and Control are:

- 4.3.1 Monitor Risks
- 4.3.2 Control Risks
- 4.3.3 Monitor Impact on CSSQ

The Project Manager must continually look for new risks, reassess old ones, and re-evaluate risk mitigation plans. The Project Manager should involve the whole Project Team in this endeavor, as various team members have their particular expertise and can bring a unique perspective to risk identification. As the

Risk Management Worksheet is integrated into the status reporting process, this review and re-evaluation should take place automatically, with the preparation of each new status report.

Because the Risk Management Worksheet places risks in order according to their priority level, it is important to update all quantifiable fields to portray an accurate risk landscape. The risk probabilities may have changed; the expected level of impact may be different, or the date of impact may be sooner or later than originally anticipated – all of these variables determine which risks the Project Team will concentrate on first.

Likewise, the Risk Management Plan needs to be constantly re-evaluated. Make sure the right people are still assigned to mitigation actions and that the actions still make sense in the context of the latest project developments.

Another consideration is whether a specific risk's probability level is high enough to warrant incorporating the Risk Management Plan in the Project Schedule via the change control process. If so, the risk should be removed from the worksheet.

Finally, the Project Manager must be constantly on the lookout for additional risks. Reviewing the risks as part of regular status reporting should involve the whole Project Team via bidirectional communications.

#### 4.3.2 Control Risks

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Sooner or later, one of the events on the Risk Management Worksheet – or an entirely new and unexpected risk – will actually occur. The Project Manager and Project Team members must evaluate the risk event and invoke the Risk Management Plan. There are generally three possible response scenarios:

1. If the risk occurred as expected, the existing Risk Management Plan may be adequate for dealing with it. Example: the project is being required to provide additional documentation to prove compliance with state regulations. However, that risk has been anticipated, and the Risk Management Plan details where and how to get the appropriate materials.
2. If the risk occurred in a different manner, or other circumstances have come to bear, the Risk Management Plan may have to be modified. Example: a consumer group brought pressure to examine the environmental impact of the product of the project more closely. As a result, the project is being required to obtain subject matter expert statements. Since the need was not

anticipated, the original contingency plan needs to be modified to comply with the new requirements.

3. If the risk event was unexpected and unanticipated, a whole new Risk Management Plan must be created to address it. Example: The Federal Government issued a mandate that challenges the project from a whole different perspective. The Project Manager needs to understand what the issue is, what response is required, and how to obtain the desired result.

Regardless of the scenario, however, as soon as the risk event occurs it ceases to be a risk (future, possible event) and becomes an issue (current, definite condition). As a result, it should transition from the Risk Management Worksheet and onto the list of current project issues, with the Risk Management Plan becoming the issue's Action Plan.

### 4.3.3 Monitor Impact on CSSQ

During the entire risk management process, the Project Manager should be especially vigilant regarding the effect on the project's Cost, Scope, Schedule and Quality (CSSQ). With the proper risk management processes in place, many risk events may come to pass without affecting (either positively or negatively) the project's defining parameters. However, when a risk event occurs that threatens the project's scope, quality standards, schedule or budget, the Project Manager must determine the proper course of action to protect the integrity of the project.

Until CSSQ impact is certain, the Project Manager must, at a minimum, introduce the event to the list of current project issues. The issue's Action Plan must reflect all the tasks required to accurately determine what impact (if any) the event will have on CSSQ. Once the impact is certain and quantifiable, the Project Manager should transition the issue to the Change Control process.

- ◆ **Risk Management Worksheet** – a record of risk variables, impact, probability, date of impact, level of priority and risk response actions which is continuously monitored and updated, and its Risk Management Plans applied as part of Project Execution and Control.

## 4.4 MANAGE PROJECT EXECUTION

Project Execution is typically the part of the lifecycle of a project when the majority of the actual work to produce the product is performed and the majority of the Project Budget is expended.

The purpose of **Manage Project Execution** is to manage every aspect of the Project Plan as work is being done to make certain the project is a success. This process is performed concurrently with the Manage CSSQ and Monitor and Control Risks processes. The tasks in this process are performed concurrently and repeatedly as various aspects of the product of the project are constructed, tested, and accepted.

### Roles

- Project Manager
- Project Sponsor
- Project Team
- Customer

### 4.4.1 Manage Change Control Process

During Project Planning, the Project Manager, Project Sponsor, and Customer agreed on a formal change control process that was documented and included in the Project Plan. The change control process describes:

- The definition of change and how to identify it
- How requests for change will be initiated
- How requests for change will be analyzed to determine if they are beneficial to the project
- The process to approve or reject change requests
- How funding will be secured to implement approved changes

### The tasks to Manage Project Execution are:

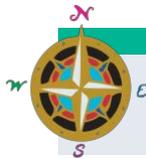
- 4.4.1 Manage Change Control Process
- 4.4.2 Manage Acceptance of Deliverables
- 4.4.3 Manage Issues
- 4.4.4 Execute Communications Plan
- 4.4.5 Manage Organizational Change
- 4.4.6 Manage the Project Team
- 4.4.7 Manage Project Implementation and Transition

Although changes can be expected to occur throughout every project phase, any negative effect on the project outcome should be avoidable if the change control process is executed and managed effectively.

The need for change is usually discovered during Project Execution, as actual task work is being performed. It is during Execution that the Project Team may

discover their original effort estimates were not accurate and will result in more or less effort being required to complete their work. It is also during Execution that the Project Sponsor or Customer may realize that, despite their best efforts to thoroughly document the Project Scope, the product being produced is not exactly what they need. It is the responsibility of the Project Manager to keep a close watch on factors that could introduce potential “scope creep” and take proactive steps to prevent it from occurring, or to manage it as it occurs.

Sometimes change control is required if a Project Team member is not able to complete what was documented in the Project Scope, because of lack of skill, time constraints, or other factors outside his/her control. In most cases, these difficult to manage situations often result in lost time in the Project Schedule and can have a major impact on the project.



When someone does not do something he or she was supposed to do as documented in the Project Plan, the resulting change is called a “Non-Compliance” change.

Sometimes change is simply informational and will most likely not affect the Project Scope or Schedule (e.g., the name of a Project Team member or the physical location of the Project Team offices may change). Changes that do not affect the project’s CSSQ do not need to follow the formal change control process, but should be documented in the Project Status Report or any other appropriate communication mechanism.

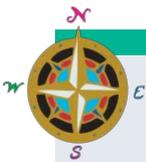
However, for all changes that affect the project’s CSSQ, it is vitally important for the Project Manager to implement and manage the change control process in every situation. Not doing so will cause confusion on the part of the Customer as to what constitutes a change. The change control process also helps maintain balance between the requirements of the project and the timeline and cost.

During Project Planning, individuals authorized to be requestors, reviewers, and approvers of change requests were identified and information about them was documented in the change control process. Change control begins when a requestor completes a change request form and submits it to the appropriate reviewer(s). (See Figure 3-6, Project Change Request.)

The role of the reviewer(s) in the change control process is to analyze the request in terms of the level of effort and skill required to implement it. The reviewer, typically an expert in the subject area, will also make a recommendation to accept or reject the change request based upon its feasibility from a technical or implementation standpoint. He/she will communicate this information to the Project Manager and document it on the Project Change Request.

One of the roles of the Project Manager in the change control process is to analyze the reviewer's recommendation, and determine the overall effect of the requested change on the Project Schedule in terms of effort, cost, and resource requirements and availability. This information will be documented on the Project Change Request and presented to the approver(s).

The approver(s) review the information and make a determination whether to approve the change request based upon the potential benefit of its implementation to the organization. If, for example, the implementation costs far outweigh the business benefit, the change request will most likely be rejected. A signature is required of all approvers, whether they are accepting or rejecting the request. If the request is being rejected, the approver must provide a reason. A signature of approval on the Project Change Request indicates that the approver accepts the consequences (impact) of the request on the project's Cost, Scope, Schedule or Quality.



NEVER execute a change request without first obtaining all required approval signatures!

Once a change request has been approved, the Project Manager must incorporate the effect of the change into the Project Schedule. All affected tasks, estimated durations, dependencies, and resources must be modified. A new baseline should then be created for the amended schedule and budget. These become the new tools against which hours will be booked and project performance measured going forward.



**REMEMBER:** Make a copy of the new baseline schedule and archive it in the project repository **BEFORE** you book new work to it! If you lose the baseline, you have nothing against which to compare later updates to see if your project is on track!

In addition, if new deliverables will be produced as a result of the change, their exact description must be included in the Project Plan, either as appendices to the Project Scope, or as separate attachments. In addition, any changes that affect the remaining components of CSSQ must be documented. All correspondence, supporting documentation and other information pertaining to the change should be saved in the appropriate location in the project repository.

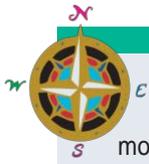
#### 4.4.2 Manage Acceptance of Deliverables

The goal of this task is to manage the acceptance of deliverables according to the acceptance management process developed during Project Planning. The acceptance management process is part of the Project Plan, and documents:

- The definition of “acceptance”
- The criteria that must be met for each deliverable to be considered “acceptable”
- The number and identity of Customers designated to be reviewers of each deliverable – typically reviewers are experts in the subject matter the deliverable covers
- The number and identity of Customers designated to be approvers – approvers have the authority to sign the approval form, indicating acceptance
- The number of business days in which deliverables must be either approved or rejected by the reviewers and approvers
- The number of times a deliverable can be resubmitted
- The escalation process that will be followed if a timely decision on approval or rejection of a deliverable is not met

The acceptance management process must be followed throughout the project. As with the change control process, the earlier in the life of the project the process begins, the sooner everyone will understand how it works and what to expect. The

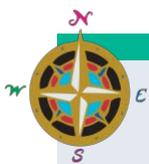
key to facilitating acceptance is first to understand Customer expectations, and then to meet them.



The acceptance management process is not set in stone...if, while executing the process, you discover parts of it are not working as expected, adjust the process to more closely fit the needs of the project. Just be sure to document your changes and get Customer approval before implementing them.

Acceptance begins when the Project Manager presents a completed deliverable and Project Deliverable Approval Form to the approver. (See Figure 2-13, Project Deliverable Approval Form.) When logistically possible, the Project Manager must take the time to formally review the deliverable, in person, with the approver. In some cases, the approver's geographic location or work shift prohibits face-to-face communication. Where in-person communication is feasible, it is recommended that the Project Manager not simply send the deliverable via email or leave it on the approver's desk. If the Project Manager has done a very thorough job in setting expectations, the approver may indicate acceptance at the end of this face-to-face presentation. More likely, however, the approver will prefer to have designated reviewers examine the document or product and recommend a course of action.

The reviewers independently analyze the deliverable and produce a recommendation as to whether to accept the deliverable, providing their comments and signature on the accompanying approval form. This must be done within the turnaround time documented in the acceptance management process. If a reviewer recommends the deliverable be rejected, he/she must provide the reason and forward the package back to the approver. This process should be followed for each person designated as a reviewer in the acceptance management process.



Keep in mind that the review and approval process will take more time if several reviewers or approvers need to get involved!

Using input and recommendations provided by the reviewer, the approver reviews the deliverable and decides if it meets the acceptance criteria documented in the acceptance management process. He/she will indicate acceptance or rejection of the deliverable on the Project Deliverable Approval Form. Once again, this must be done within the turnaround time documented in the acceptance management process. If the approver recommends the deliverable be rejected, he/she must provide the reason and forward the package to the Project Manager. It is then the responsibility of the Project Manager to have the deliverable adjusted as necessary and then resubmit it to the approver. This process should be followed for each person designated as an approver in the acceptance management process. The Project Manager must ensure that for rejected deliverables, specific corrective actions are defined, i.e., “I would accept this if...”

It is the responsibility of the Project Manager to be cognizant of the time elapsing during the review and approval process, in an attempt to complete the process within the maximum number of business days agreed upon and documented. Significant delays in the process should trigger the Project Manager to escalate the situation, following the documented escalation procedure. Similarly, the Project Manager should be aware of the number of times the acceptance process is being repeated. How many times is the Project Team making changes to a deliverable based upon its rejection? The number of times a deliverable can be resubmitted to the approver was also documented in the acceptance management process. If a deliverable is rejected more than once, the Project Manager should take immediate action to analyze the situation, resolve the conflict, or exercise the appropriate escalation procedure to get it resolved. A serious delay in the acceptance of a deliverable will almost always result in project delays.



If the number of iterations becomes unreasonable, the Project Manager should recognize that a bigger problem may exist, and should take the appropriate action to find out what it is and fix it!

The Project Manager should maintain a log of the activity that transpires while a deliverable is going through the acceptance management process. The deliverable acceptance log can be

included as part of the Status Report that is reviewed with the Project Sponsor. (See Figure 2-10, the Project Status Report.)

Once a deliverable is considered acceptable, the Project Manager should gain the appropriate signatures on the Project Deliverable Approval Form. Signatures on the form indicate formal acceptance of the deliverable.

#### 4.4.3 Manage Issues

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Managing issues involves documenting, reporting, escalating, tracking, and resolving problems that occur as a project progresses. During Project Planning, the Project Manager and Project Sponsor agreed upon and documented the process for managing issues and included the process in the Project Plan.

The issue escalation and management process addresses the following:

- How issues will be captured and tracked
- How issues will be prioritized
- How and when issues will be escalated for resolution

Issues are usually questions, suggestions, or problems raised by Project Team members, including the Project Manager and Customer. They are different from changes in that they do not usually have an immediate impact on the Project Scope or Schedule. If issues remain unresolved, however, they are likely to affect the Project Schedule or Budget, resulting in the need for change control. It is, therefore, very important to have an issue escalation and management process in place, and to execute the process before change control procedures become necessary.

Anyone involved in a project in any way can and should inform the Project Manager of issues. It is the responsibility of the Project Manager and Project Sponsor to foster an environment where communicating issues is not only acceptable but strongly encouraged. Individuals should feel a responsibility to the organization to voice their concerns. If individuals are fearful of communicating issues, the resulting effect on the project can be devastating.



The Project Manager should be cautious about reacting to an issue that is communicated by “shooting the messenger.” This sends the wrong message to the Project Team. No matter how devastating the news or the issue, the Project Manager should thank the person who raised the issue and solicit ideas from that individual and other team members for its mitigation.

The Project Manager is responsible for capturing and tracking issues as soon as they arise, using the issues log section in the Project Status Report. Every issue, whether technical or business related, should be documented in the report. (See the Issues Log section in Figure 2-10, the Project Status Report.) Below are some examples of project issues:

- Computer system will be down for routine maintenance
- Project Sponsor is taking another job
- Project Team member start date may be sooner (or later) than expected
- There is a delay in approving or rejecting a change request or deliverable
- Severe weather is predicted in the area of the building site

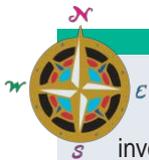
Once the description of a new issue has been logged, the Project Manager should estimate the potential impact the issue could have on the project. Based upon potential impact, the Project Manager prioritizes the issue in relation to all other open issues. The goal of issue management is to resolve all concerns completely and promptly, but in reality the issues with the highest priority should be addressed first.

The issues log should also include the date the issue is recorded, its anticipated closure date, and the name of the individual responsible for resolving it or seeing that it is resolved. The due date for closure must be a specific date (i.e., the date cannot be “ASAP”). The responsible party must be a specific individual, not a functional group (i.e., an issue should not be assigned to the “IT Department” or the “DBA group”).

While the issue remains open, its continuing impact and the status of its action plan should be discussed at every status meeting. If appropriate resources or materials are not available to complete the action items, or if there is disagreement about any

of the elements on the issues log, the Project Manager should invoke previously-defined escalation procedures. Unresolved issues are one of the leading causes of project failure, and the Project Manager must pursue issue resolution relentlessly.

As progress occurs on the resolution of an issue, the Project Manager should update the issues log to reflect what has occurred. As issues are closed, they should be moved to a different section of the issues log. Along with a description of how the issue was resolved, the Project Manager should document who resolved the issue and the closure date.



When managing issues, document EVERYTHING (yes, EVERYTHING) that happens as issues are resolved. Be sure to note what happened, when it happened and who was involved. Don't skimp on the details. Keep an issues "diary."

When issues are closed, don't delete them from your issues log – instead maintain the "diary" of closed issues in a separate file or folder or section of the log. This "diary" will ensure that you cover your bases, and the information included in it may become invaluable to you or another Project Manager as lessons learned when resolving similar issues down the road!

#### 4.4.4 Execute Communications Plans

During Project Planning, the Communications Plan was refined to describe how project communications will occur, and expanded to describe the way communications will be managed. As a project progresses, events may occur to alter the way information is accessed or change communications requirements. During Project Execution, the Project Manager and Project Team must again review whether the Communications Plan is still current and applicable to the project. If it is determined that any portion of the plan is no longer applicable, the Project Manager should update the document.

During Project Execution the Communications Plan is carried out so that required information is made available to the appropriate individuals at the appropriate times, and new or unexpected requests receive a prompt response. Communications must continue to be bi-directional during Project Execution. The Project Manager must provide required information to the Project Team and appropriate Stakeholders on a timely basis, and the Project Team and Stakeholders must provide required information to the Project Manager.

In addition to having a solid Communications Plan in place, it is the responsibility of members of the Project Team to exercise good communication skills. When composing correspondence, progress reports, meeting minutes, etc., and when speaking with individuals face to face, the team members are responsible for clear, unambiguous, and complete communication of information. The receiver, in turn, must be sure information is not only received correctly and completely, but that it is understood.

During Project Execution, the Project Manager, Project Team, and Stakeholders will share information using a variety of communication mechanisms. These were defined during Project Planning and may include:

- Status Meetings
- Status Reports
- Memos
- Newsletters
- Executive Correspondence
- Meeting Notes
- Executive Meetings
- Steering Committee Meetings

This information is collected, stored and disseminated based upon procedures established and documented in the Communications Plan. While executing the plan, the Project Manager must be aware of how the organization will use the information, and whether the plan is effective. He/she must be flexible and ready to modify the plan if portions of it are not working as expected or communications needs change within the Performing Organization.

Of the many mechanisms available to the Project Manager, status reporting is particularly useful for communicating the performance of a project. Project Team members must complete *Progress Reports* providing regular feedback to the Project Manager. These reports can serve a dual purpose – as a reporting mechanism to the Project Manager and also to the team member’s immediate supervisor. Progress Reports should document detailed descriptions of actual work accomplished and include Team members’ estimates of the effort they feel will be required to complete tasks. Progress Reports should also contain

information regarding work to be done in upcoming weeks, and list any issues preventing completion of required tasks. When correctly completed by the Project Team, the reports are very useful to the Project Manager for updating the Project Schedule, and for anticipating issues and proactively planning ways for their resolution. (See Figure 4-4, the Progress Report.)

Using the Progress Reports prepared by the Project Team, the Project Manager should complete a Status Report to be presented to the Project Sponsor. In this report, the Project Manager measures the “health and progress” of the project against the Project Plan. It is the primary communication vehicle between the Project Manager and the Project Sponsor, and should contain the following information:

- Summary of Progress to Project Schedule – a high-level glance at the major project deliverables, with their intended and actual start and end dates.
- Issues and action items – a running list of open and closed issues, including the name of the person responsible for taking action to resolve them. (See Manage Issues, 4.4.3.)
- Significant accomplishments – a list of the most important completed tasks, or a description of work done toward their completion.
- Significant planned accomplishments for the following weeks – a description of the most important tasks scheduled for completion during the following weeks.
- Deliverable acceptance log – a running diary of actions taken toward acceptance of deliverables. (See Manage Acceptance of Deliverables, 4.4.2.)
- Change control log – a running diary of actions taken toward acceptance of change control. (See Manage Change Control Process, 4.4.1.)
- Lost time – a description of any situation that occurred that resulted in the Project Team being unable to perform work.

Other project documents that should be attached to the Status Report include any Change Control Requests, Deliverable Acceptance Forms, Meetings Notes, and the Risk Management Worksheet.

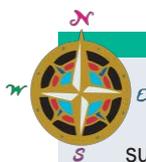
The Status Report becomes the point of discussion for the Status Meeting, the regularly scheduled forum where the Project Manager presents the project status and discusses issues with the Project Sponsor.



Conduct a regularly-scheduled meeting with the Project Sponsor, using the Status Report to drive the agenda. If necessary, invite members of the Project Team who have expertise in a certain area you plan to discuss. Use the meeting time wisely – it is a great opportunity to have focused, dedicated time with your Project Sponsor and is the perfect forum for communicating the status of the project and planning ways to proactively resolve any issues or concerns.

Even though information is presented to the Project Sponsor at a summary level, it is very important to record and maintain ALL the detailed, supporting task-level information. Detailed information can be included as an appendix to your Status Report, or maintained in a separate document. Regardless of its location, detailed information should always be made available to the Project Team, and will be invaluable to you if your Project Sponsor requests clarification or more information.

The Project Manager should periodically assemble the Project Team to review the status of the project, discuss their accomplishments, and communicate any issues or concerns in an open, honest, constructive forum. These meetings are ideal opportunities for the Project Manager to gain insight into the day-to-day activities of Project Team members, especially if the team is large and individual interaction between the Project Manager and each team member is infrequent.



The Project Manager should determine the frequency of status meetings based upon the current state of the project and his/her good judgment. Weekly meetings may be sufficient during times of normal project activity, but during “crunch times” it may be necessary to gather more frequently. When a deadline is approaching and/or the Project Team appears to be under stress, consider holding a quick “sanity check” at the beginning of each day to ensure the team understands and remains focused on the important tasks for that day.

During the meeting the Project Manager should review the Project Schedule with the team and verify with each member the work that needs to be accomplished in upcoming weeks. Part of the meeting should focus on the team’s Progress

Reports, to verify estimates to complete tasks and to discuss issues that may impact estimates. The Project Manager can then use information communicated during the Project Team meetings as input to the Status Report.

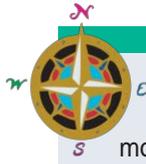
The regularly-scheduled Project Team meeting is also a good forum to recognize individual accomplishments, and to reward team members for outstanding work.



On large projects where gathering the entire team is prohibitive, Team Leaders can assemble the appropriate Project Team members for meetings. It will then be necessary for Team Leaders to meet regularly with the Project Manager to ensure all communication lines remain open.

As documents are gathered and generated during Project Execution, the Project Manager is responsible for filing them in the appropriate location in the project repository. The repository must be maintained on a continuous basis, as it represents a history of the project, from its inception through closure. It will be used as a reference manual throughout the project and should, therefore, be made available to every member of the Project Team. At a minimum, the Project Manager should make sure the following repository items are always current:

- Project Schedule, including any project financials
- Status Report, including:
  - ▲ Change control log
  - ▲ Issues log (open and closed)
  - ▲ Deliverable acceptance log
- Team member Progress Reports
- Team member timesheets, if used
- Risk Management Worksheet
- All correspondence, including any pivotal or decision-making memos, letters, email, etc.
- Meeting notes, results and/or actions



The project repository puts the history of the project at your fingertips, but only if it is kept up-to-date! It ensures project continuity even if the Project Manager gets promoted or reassigned.

#### 4.4.5 Manage Organizational Change

During Project Planning, the Project Manager and Customer developed an Organizational Change Management Plan, taking into consideration the impact the product of the project will have on the Performing Organization.

During Project Execution, as the product is being produced, the Project Manager and Customer must evaluate the Organizational Change Management Plan documented during Project Planning to be sure it is still current. Because more information about the specific changes to the organization in terms of people, process and culture is known, it is quite likely that the plan will need to be adjusted and more details developed.

It is extremely important for the Project Manager and Project Sponsor to be actively involved in the change effort, and to proactively manage communications with the Performing Organization and Consumers. As specific changes are implemented in advance of and in preparation for the final product of the project, all involved parties must be made aware of the anticipated timing of events to give them ample time to prepare and participate as required.

Managing Organizational Change should include:

- **People:** Planned workforce changes must be executed in careful coordination with, and usually at the direction of, the Performing Organization.

- **Process:** The redesign of existing business processes affected by the implementation of the product of the project, and the development of corresponding procedures, must be managed in coordination with product development. The redesigned processes and procedures must align with the product and associated changes. The implementation of the new processes, and any associated training or announcements regarding their introduction into the Performing Organization, must be integrated with the product implementation (to coincide with or precede the product, as appropriate). The Project Manager must manage these particular aspects of the schedule with diplomacy and tact. The active involvement of the Project Sponsor may be required as changes are implemented.
- **Culture:** Specific plans were developed based on the extent of the “culture shock” the product of the project was expected to introduce into the Performing Organization and its business strategy, established norms for performance, leadership approach, management style, approach to Customers, use of power, approach to decision making, and employee roles. Using the results of the assessment of the Performing Organization’s “readiness for change,” the Project Manager can develop more specific action plans to increase the organization’s readiness and ability to adapt to the changes of the project. Most likely, these will include education and training events that can be targeted to specific audiences affected by the changes. The plans should provide information about the changes well in advance of implementation, so that affected Stakeholders have ample opportunity to express their concerns. To the greatest extent possible, the Stakeholders should be given a “preview” of how the product will actually work. They should also be given adequate training on how to adjust to change, how to work in the new environment, or similar “soft skills.”

The Project Manager, with the active participation and support of the Customer and Project Sponsor, must be able to manage the specific activities that will adequately prepare the Performing Organization for the anticipated changes. (See Leading the Change Management Effort, Section II:2.2 for additional information on organizational change management.)

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#### 4.4.6 Manage the Project Team

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In order to successfully meet the needs of a project, it is important to have a high-performing Project Team made up of individuals who are both technically skilled and motivated to contribute to the project's outcome. One of the many responsibilities of a Project Manager is to enhance the ability of each Project Team member to contribute to the project, while also fostering individual growth and accomplishment. At the same time, each individual must be encouraged to share ideas and work with others toward a common goal. The Project Manager, then, must be a leader, communicator, negotiator, influencer, and problem solver! The level of skills and competencies to successfully fill these roles helps distinguish good Project Managers from great ones. (See Section II:2, Leadership, for more information on Project Manager competencies.)

To maximize the successful performance of the Project Team, the Project Manager must do the following:

##### Execute the Training Plan

During Project Planning, the Project Manager evaluated the skills of each team member to determine whether he/she met the current and future needs of the project. For each team member requiring training, the Project Manager established a Training Plan. The Training Plan includes the method by which each team member will be trained, and the corresponding training schedule. During Project Execution, the Project Manager must review the contents of the Training Plan to be sure they are still applicable to the project. If additional training is necessary, it should be added to the plan. If it is determined that planned training is no longer necessary, it must be removed from the plan. If new team members have joined the project since the Training Plan was established, the Project Manager must evaluate the skill level of the new members to determine if additional training is needed. In all cases, training tasks must be added to or removed from both the Training Plan and the Project Schedule, since they will affect the end date of the project.

As training takes place during Project Execution, the Project Manager should update the Training Plan with the names of the trainees and actual training completion dates. This information will be used to measure the success of the Training Plan, and enable the Project Manager to provide input for evaluating team members and preparing staff performance appraisals. In addition, the Project Manager should mark the corresponding Project Schedule tasks as complete.

### **Allocate Work Properly and Ensure Accountability**

A basic responsibility of the Project Manager is to assign work to the Project Team and ensure that the work is completed according to the Project Schedule. The Project Manager (or Team Leaders if the project is large) is responsible for allocating tasks to appropriate team members at the appropriate times. A good Project Manager establishes and maintains a Project Schedule that minimizes team member down time. Along with the Team Leaders, the Project Manager must continuously communicate to each member of the team what is required and by when, and then manage the performance of each team member in meeting the requirements.

Since the Project Manager is ultimately responsible for the success or failure of a project, he/she must direct Project Team endeavors and encourage team members to be accountable for their work. Accountability should be formally documented and measured through the use of team member Progress Reports. (See Figure 4-4, the Progress Report.) But the Project Manager must also be willing to communicate face-to-face with the Project Team. Regular personal communication is one of the most effective ways to gather input on the status of project activities, discuss issues and concerns, recognize good work, encourage and provide support to team members who are struggling, and build relationships. It is also one of the primary ways to discover and take action to resolve team member performance issues.

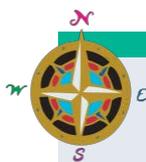
### **Establish a Team Environment**

Project Team members must learn to work together to achieve project goals. They must recognize that there is more to team-work than simply having team members feel good about each other. High-performing Project Teams are disciplined. Team

members participate in all required meetings, are willing to suppress their egos for the good of the group, take their assigned tasks seriously, and continuously strive to improve their skills. High-performing Project Teams are either empowered to make decisions or are included in decision-making processes. This is the essence of project ownership.

Project Managers must develop sufficient management competencies to be able to create an environment that encourages team members to excel. The Project Manager may consider implementing some of the following:

- **Team-Building Activities** – these are actions taken specifically to improve the performance of the entire team. Activities can range from short items on a meeting agenda to extended, off-site professionally facilitated sessions. However implemented, team-building activities provide opportunities for team members to improve their interpersonal and working relationships.
- **Team Recognition and Rewards** – these are actions intended to promote, encourage, and reinforce desired behavior or exceptional performance. Frequently they are initiated by individuals at management level, but they are also very effective when initiated by an individual's peer. In all cases, recognition programs must be documented clearly enough so team members understand what level of performance warrants an award.



Don't underestimate the power of a box of donuts or a celebratory cake when the team reaches a major milestone!

The primary objective for establishing an appropriate team environment is to improve overall project performance. When team members are encouraged to do their best and are motivated about a project, they are more likely to do whatever is necessary to improve their individual skills so they are more efficient and effective in performing their assigned activities. And when team members understand the importance of interacting with each other, they are more willing to identify and proactively deal with conflict. Resolving issues early leaves team members more time for producing actual project work.

### Manage Personnel Changes

All organizations change. Personnel may transfer to different assignments or leave their employers, new individuals may be added to a Project Team or Customer organization, or the nature of the project may change, forcing a change in project responsibilities or reporting structure. A successful Project Manager has a plan in place to minimize the effect these types of changes may have on the outcome of the project or the morale of the Project Team. At a minimum, this plan should describe what to do when there are changes to the Project Team, but it should also discuss the actions to take if the Customers change. The process may be formal or very informal, depending on the size and needs of the project. In all cases, changes to the Project Team or Customer will most likely require updates to the Project Schedule.

#### 4.4.7 Manage Project Implementation and Transition

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During Project Planning, the Project Manager formulated and documented a plan for implementing or deploying the product of the project, and for transitioning the responsibility for the outcome of the project from the Project Team to the Performing Organization. During Project Execution and Control, this Implementation and Transition Plan will be more fully developed as the product of the project is developed, and as specific activities in the plan are executed.

During Project Execution and Control, the Project Team will gain a better understanding of the impact the resulting product will have on the Performing Organization and Consumers. Activities begin that are required to prepare the Consumers to use the product, along with the tasks to prepare the Performing Organization to support it.

Managing Implementation and Transition includes:

- Monitoring and ensuring timely completion of all facilities issues, such as acquiring the necessary physical space, installing appropriate software, obtaining the appropriate building permits, etc.
- Coordinating Customer Acceptance Testing, including logistics of when and how Customers will test the product to confirm that it meets requirements before it is formally implemented and transitioned. Customer testing is one of the last opportunities for necessary changes to be

identified and made to the product before rollout. Time for sufficient Customer testing and any resulting rework that will affect the Project Team must be incorporated in the Project Schedule.

- Managing the steps that need to be taken to ensure Consumers will be ready to use the product once it is implemented. These steps must be coordinated with the Organizational Change Management Plan, and will include training and orientation on the use of the product. Any training for Customers or Consumers must be provided according to the plan and coordinated with other aspects of the implementation of the product.
- Managing the detailed implementation. The Project Manager must monitor implementation activities and make any necessary adjustments. The implementation will vary depending upon the needs of the Performing Organization and the product of the project. Some implementations are “done” at the flip of the final switch, such as opening a new highway, or publishing a book. Others are phased into implementation, like installing an inventory management system module-by-module, moving to a new building floor-by-floor, or implementing a new business process location-by-location.
- Managing the steps that need to be taken to ensure the appropriate individuals are ready to support the product once it has been implemented and is in use. This may include negotiating with various internal organizations to determine the appropriate timing of the transition of responsibility, assigning specific organizations and individuals to support the specific products, and providing necessary training. The Project Manager must carefully manage the point in implementation that the Performing Organization takes responsibility for production problems, “help” or trouble calls, and for resolving the problems, and ensure that all pre-requisites for transition have been met – for example, performance standards, quality standards, etc.
- Managing production of all necessary documentation. The Project Manager must ensure that all documents or records that will be provided with the product are produced. Examples of documentation include:
  - ▲ User manuals
  - ▲ On-line help
  - ▲ Assembly or usage instructions

Overall, the Project Manager must be sure each required activity is carried out according to the Implementation and Transition Plan and schedule, and to immediately communicate any discrepancies to the Project Sponsor.

◆ **Product of the Project** – at the end of Project Execution, all required deliverables as documented in the Project Plan have been produced by the Project Team and approved by the Project Sponsor. The product of the project, successfully transitioned from the Project Team to the Performing Organization, is the end result of Project Execution and Control.

4.5 GAIN PROJECT ACCEPTANCE

The purpose of **Gain Project Acceptance** is to formally acknowledge that all deliverables produced during Project Execution and Control have been completed, tested, accepted, and approved by the project’s Customers and the Project Sponsor, and that the product or service the project developed was successfully transitioned from the Project Team to the Performing Organization. Formal acceptance and approval also signify that the project is essentially over, and is ready for Project Closeout.

- | Roles                      |
|----------------------------|
| ● Project Manager          |
| ● Project Sponsor          |
| ● Project Team Members     |
| ● Customer Representatives |
| ● Customer Decision-Maker  |

### 4.5.1 Conduct Final Status Meeting

Once the product of the project has been successfully transitioned to the Performing Organization, the Project Manager should prepare the final status report and conduct the final status meeting. The Project Schedule must be up to date for all completed project and project management lifecycle phases. This is the final opportunity for all participants to confirm that the product of the project has been successfully developed and transitioned. Any out-standing issues or action items must be transitioned from the Project Team to the Performing Organization.

The tasks to Gain Project Acceptance are:

- 4.5.1 Conduct Final Status Meeting
- 4.5.2 Gain Acceptance Signature from Project Sponsor

### 4.5.2 Gain Acceptance Signature from Project Sponsor

As the deliverables of the project are produced and accepted, approval signatures are gained from the Project Sponsor and Customer Decision-Makers. Following the final status meeting, the Project Manager must obtain the Project Sponsor's signature one final time, indicating acceptance of the project to date, and indicating approval to proceed to Project Closeout. (See Figure 4-7, Project Acceptance Form.) If the Project Sponsor does not accept the project, he/she must indicate the specific reason(s) for rejection. The Project Manager is then responsible for resolving the issues and seeking the Project Sponsor's acceptance again.

- ◆ **Signed Project Acceptance Form** – a formal document indicating Project Sponsor acceptance of all project deliverables and approval to proceed to Project Closeout.

Figure 4-6 Project Acceptance Form

**Project Acceptance Form**

**PROJECT IDENTIFICATION**

Project Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Project Sponsor: \_\_\_\_\_ Project Manager: \_\_\_\_\_

*Enter the **Project Name**.  
Enter the current **Date**.  
Enter the name of the **Project Sponsor**.  
Enter the name of the assigned **Project Manager**.*

**PROJECT SPONSOR INFORMATION**

Project Sponsor Name: \_\_\_\_\_  
Action: Approve:  Reject:   
Project Sponsor Comments:  
  
  
Project Sponsor Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

*Provide the above information to the **Project Sponsor**. The Project Sponsor should either accept or reject the project and include any comments. If the Project Sponsor is rejecting the project, the reason for rejection must be provided. If the project is being approved, the Project Sponsor must sign the form and enter the **Date** approved.*

**PROJECT MANAGER INFORMATION**

\_\_\_\_\_  
Name (Print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

*Once the project has been approved, the **Project Manager** should indicate agreement by providing a **Signature** and **Date**.*



How to Use

Use this checklist throughout Project Execution and Control to help ensure all requirements of the phase are met. As each item is completed, indicate its completion date. Use the Comments column to add information that may be helpful to you as you proceed through the project. If you elect NOT to complete an item on the checklist, indicate the reason and describe how the objectives of that item are otherwise being met.

Figure 4-7

Item Description	Page	Completion Date	Comments	Reason for NOT Completing
Conduct Execution and Control Kick-off	204			
Ensure team members have whatever is required to perform their tasks	204			
Meet with each team member to convey roles and responsibilities	204			
Distribute copies of all project materials and deliverables to all team members	205			
Hold orientation sessions for new members	205			
Review previous deliverables and components of Project Plan	205			
Schedule time and location of kick-off meeting	206			
Prepare materials for distribution at meeting	206			
Invite appropriate attendees	206			
Prepare meeting presentation and agenda	206			
Designate meeting scribe	206			
Conduct kick-off meeting	206			

Item Description	Page	Completion Date	Comments	Reason for NOT Completing
Distribute meeting notes to all attendees	206			
Update the project repository	206			
<b>Manage CSSQ</b>	<b>209</b>			
Update and analyze the Project Schedule as needed	211			
Conduct peer review of deliverables, if appropriate	215			
Implement quality checklists	216			
Conduct project audits	217			
Manage the budget by monitoring financial performance regularly	222			
Update project repository	222			
<b>Monitor and Control Risks</b>	<b>225</b>			
Review identified risks with Project Team and Project Sponsor	225			
Re-evaluate each risk	226			
Update Risk Management Worksheet regularly	226			
Execute contingency plans or modify them, if necessary	226			
Create new contingency plans to accommodate new risks	227			
Update project repository	227			
<b>Manage Project Execution</b>	<b>228</b>			
Execute change control process when necessary	228			
Gain acceptance and approval of all deliverables	231			
Identify and resolve issues, escalating them if necessary	234			
Provide timely communications according to Communications Plan	236			
Prepare Project Status Report regularly	237			

Item Description	Page	Completion Date	Comments	Reason for NOT Completing
Conduct status meeting with Project Sponsor regularly	238			
Ensure status meetings are being held with Project Team regularly	239			
Conduct training for support personnel	242			
Conduct training for Consumers	242			
Communicate rollout information	242			
Conduct training for Project Team members and update Training Plan	243			
Allocate and assign work to Project Team members	244			
Conduct team building activities	245			
Reward team members	245			
Manage Project Team member changes	246			
Manage changes to Customer's organization	246			
Acquire necessary physical space and equipment to support the product	246			
Transition product to Performing Organization	246			
Update the project repository	246			
<b>Gain Project Acceptance</b>	<b>248</b>			
Prepare final Status Report	249			
Prepare formal Project Acceptance Form	249			
Conduct final Status Meeting with Project Sponsor and present Project Acceptance Form	249			
Resolve any issues	249			
Gain final project acceptance signature from Project Sponsor	249			



The ultimate measurements of success for Project Execution and Control are the product acceptance by the Customer, and project acceptance by the Project Sponsor.

Meanwhile, the Project Manager can still assess how successfully the project is proceeding through Project Execution and Control by utilizing the measurement criteria outlined below. Because the processes in this phase (between Kick-off and Acceptance) are iterative, continuous and concurrent, the measurements for these processes need to be taken at regular intervals – probably coincidental with project status meetings. More than one “No” answer indicates a serious risk to the eventual success of your project.

Figure 4-8

Process	Measurements of Success	Yes	No
Conduct Project Execution and Control Kick-off	Did you receive confirmation from ALL Project Team members that they agree with their role descriptions, and that they understand and agree with the project objectives, risks and timetables as recorded in the kick-off meeting notes?		
Manage CSSQ	Do your team members agree that the estimates to complete for all open tasks are accurate?		
	Has your team implemented any “lessons learned” from either the peer review or the project audit process?		
	Is the Project Sponsor aware of the latest total current budget for the project?		
	Is your schedule current?		
Monitor and Control Risks	Have you adjusted the risk priority level for any risks on the Risk Management Worksheet?		
Manage Project Execution	Were all changes to the scope, schedule, cost or quality parameters of the project made with a signed Change Control Request?		
	Have all deliverables been presented to decision makers with prior preview of the deliverable in progress?		
	Is the deliverable approval cycle less than or equal to the period of time identified in the Acceptance Management Plan?		
	Are all project issues recorded in the Issue Log in the Project Status Report?		
	Is the Status Meeting being held as often as indicated in the Communications Plan?		
	If any Customer Decision-Makers are consistently absent from the status meetings, have they designated a replacement?		
	Are you confident that the organizational preparedness for the project is proceeding according to the plan you agreed to?		
	Are your team members showing no lost time in their Progress Reports?		
Gain Project Acceptance	Do you have a Project Acceptance Form signed by your Project Sponsor accepting the project?		

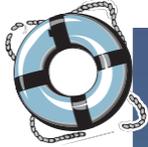
Project Execution and Control is where the rubber meets the road. In the immortal words of Yoda, it's "Do! Or do not! There is no try."

What are some of the key elements of Project Execution and Control that require the most attention? Not surprisingly, this phase has the most pitfalls and the most areas for consideration. The following table identifies processes and tasks which have pitfalls highlighted in this section.

Figure 4-9

Process	Task	Why is it important?
Manage CSSQ	Manage Project Schedule	Schedule slippage is the most visible sign of a project in trouble.
Manage Project Execution	Manage Issues	"That malfunctioning little #@?*, this is all his fault." Maybe, maybe not. But it's still your responsibility to make sure the actual problem is fixed.
	Manage Acceptance of Deliverables	"Don't be too proud of this technological terror you've constructed." Your product is only as good as your Customer thinks it is.
	Execute Communications Plan	"Don't get technical with me!" Communicate with your Customers as you would have them communicate with you.
	Manage Organizational Change/Manage Product Implementation and Transition	You may have created the most awesome product in the known universe, but what good is it if the organization is not ready to utilize it?
	Manage the Project Team	"Who's the more foolish... the fool or the fool who follows him?" With some teams, it's hard to tell who's leading whom. Don't let that happen to you!

### PITFALL #1 – YOUR SLIP IS SHOWING (OR YOU WISH YOU WERE A DAY LATE AND A DOLLAR SHORT!)



OK, the unthinkable has happened. Your project is actually behind schedule. Every week, something seems to happen, something quite outside everyone's control. You analyze, advise, reason, plead – and yet here you are, adjusting your deliverable dates once again. And the worst part of it is, deep down you really don't know why or, more importantly, what you can do about it.

Well, there is no need to panic. After all, you can always turn to the wise old Project Manager in the office across the hall who is ready and willing to help you, right? No? Oh well, then, you can always panic.

But before you do, let's figure out what's wrong. There may be myriad reasons why the schedule slips, but some of them are much more likely to occur than others. Broadly speaking, the fault may lie not in our stars, but in:

- Our customers. They love to change their minds – all the time!
- Our teammates. They may not be prepared, or may not have “the right stuff.”
- Our environment. We may be camouflaged for desert warfare, but find ourselves fighting through the swamp.
- Ourselves. In the final analysis, the buck always stops with the Project Manager. So whatever is going wrong – it's probably your fault (at least for not managing it properly!).

Now let's tackle each problem in turn, starting with the most likely one.

**Problem:** Management shortcomings.

**Solution:** C3PO said, “It's against my programming to impersonate a Deity!” But many Project Managers try, or feel they ought to. The tough part is that Project Manager's failures tend to disguise themselves as something else. When the Project Manager does not apply the right methodology to requirements gathering, and does not apply the right discipline to documenting its outcome, the result may appear to implicate Customers. When the Project Manager does not set up the right Project Team structure, and does not apply the right discipline to delivering assignments to all team members, the result may appear

to imply an incompetent Project Team. When the Project Manager does not select the right technology, or does not secure enough support from the Performing Organization, the result may appear to indicate an unfavorable environment.

But the odds are, when something is going wrong, you should “start with the man in the mirror and ask him to change his ways.”

**Problem:** The requirements are not clear, or they are constantly changing.

**Solution:** Well, it takes no genius to realize that you can’t hit a target you can’t see or catch. But what can you DO about it? For starters, you need to figure out whether (a) the requirements were not defined clearly from the beginning or (b) the Customers keep changing their minds.

In the first case, you need to hit the brakes hard, and then redirect all resources at your command to re-define the requirements. Go back to the Customers, and re-confirm or figure out what it is they REALLY want. Since the original requirements-gathering process obviously did not work, first you need to analyze the way you went about gathering, defining and documenting the requirements, and try to improve it this time around.

In the second case, you need to have a chat with your Project Sponsor. Explain that by not sticking to their agreement (you do have their signature accepting the requirements, right?) the Customers are jeopardizing the project in all its parameters (Cost, Scope, Schedule and Quality), and, as a result, the Project Sponsor has essentially three options: (1) stop the requirements dithering, (2) expand the Project Budget to accommodate the process (warning: you will still need option 1 eventually!) or (3) cancel the project now (with small overruns) or later (with major overruns).

In either case, change control is key. As soon as you detect an increase in scope, even if you still don’t know the full extent of it, you need to start the change control process. Remember that change control is not a bad thing; it’s just a process to manage enhancements as well as risks and mistakes. Changes are often unavoidable, as in the case of legislative initiatives or technological advances, and change control serves as a mechanism to assure everyone is aware of and agrees to all deviations from the plan.

**Problem:** Project Team members don't produce.

**Solution:** First, check to make sure that the fault is not with the environment and/or management. It most probably is. But it just may be possible that your folks do not have the right skills, knowledge or tools to get the job done. Of course, that should be no surprise to you, and you should have had your team training plan going full swing, right? Well, nobody's perfect. The important thing to do is to separate what you can fix from what you can't. For example, if the folks do not have the right tools to do the job – that can be fixed, even if you have to go to the ends of the Earth to get them. Likewise, if the team members do not have the right knowledge – well, that can be fixed too, although by now it may be too late. But if you find that you are stuck with a turkey who just can't do the job, you have a bigger problem. The first thing to do is to try a variety of managerial approaches with the person. Everyone is different, and some people react to certain management styles better than others. But if after deploying your whole managerial repertoire the person still comes up short, the best thing to do is to consult with your manager, or another "seasoned" Project Manager, and understand how such situations have been handled in your organization in the past.

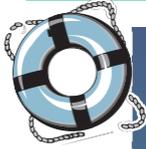
**Problem:** The project environment is not what you expected.

**Solution:** This problem can take one of two flavors. One, the Performing Organization may not be ready for your project, and is not providing you with the support infrastructure you require. Two, the technology you are trying to utilize is wrong, immature, or not properly implemented.

For the first eventuality, sound the alarms! This is when you need that Organizational Change Management Plan, and your Implementation and Transition Plan. You will need to have another one of those chats with your Project Sponsor. Explain how the team is doing all it can to deliver the product, but the support structure is failing you all around. Make specific suggestions as to what you need, and how it could be accomplished.

For the second eventuality, you must make a quick decision whether the technology can be fixed, or needs to be replaced. Some technological advances sound great in concept, but are just not ready for prime time. Try to avoid "bleeding edge" technologies altogether, but if you do get entangled in one, be ruthless – going back and retracing your steps using an older, less sexy but more stable technology may pay off in productivity gains for the rest of the project, compared with slugging through the immature mire of somebody's half-baked product.

### PITFALL #2 – YOU DROP THE ISSUE BALL



In the course of the project, many issues come up. By definition, issues have a potentially adverse impact on the project's CSSQ. Most of them are solved internally, within the Project Team, but some require actions or decisions on the part of other players with whom you may have little influence.

The important fact to remember is that project issues are the Project Manager's responsibility. No matter how clear you are in communicating the issue, no matter how little say you have in its resolution – it remains your responsibility. Identifying another person as a party who can resolve the issue does not abdicate your responsibility to follow it through. Even obtaining consensus that another agency unit should, or a promise that they would, resolve it does not remove your obligation to track the issue to a successful conclusion.

One of the most natural pitfalls is to assume that once you have successfully convinced everyone that someone else has to solve the issue, you are done. On the contrary! Because it is now out of your control, you must be all the more dogged in the pursuit of its resolution. Tell the responsible parties that you're not going away. Keep asking them what you can do to help get the issue resolved, but keep tracking their progress – or lack thereof – on your status reports. Use all the tools in the project Communications Plan to continuously shine light on the issue.

### PITFALL #3 – YOU FALL INTO THE PROJECT BLACK BOX



**Scene 1** – You employ the latest facilitation techniques to extract all possible requirements from your Customers, even requirements they did not know they had.

**Scene 2** – Your team performs wonders to design the perfect product, exactly as the Customers requested, and works like the dickens to develop it exactly as envisioned.

**Scene 3** – You beam with pride as you deliver your masterpiece to an eager Customer.

**Scene 4** – You slink away in shame as the Customer continues to rant and rave about all the features that the product does not have even though they told you about them all along.

What happened? You “black-boxed” your project. The Customers saw you when you were gathering the requirements. Then you and your team went away into the project black box, and only came out in time to show the Customer the finished product. The problem is, things changed in the interim! The Customer cast of characters may have changed. The business conditions may have changed. The expectations may have changed. And you did not keep in synch. Worse, you did not keep your Customers in synch with your project. You just assumed that because you are giving your Customers exactly what they originally asked for, they would like it. But you know what happens when you assume.

The simple remedy for the black box phenomenon is keeping the Customers involved every step of the way. You should constantly show select Customers project deliverables as they are being developed. Not so they can change their minds but so they know what to expect on delivery. You certainly want to minimize the number of decision-makers who will accept and sign off on your deliverables (chasing signatures of more than a couple of people is a pain) but you want to maximize the number of people who review, or even preview your stuff.

#### PITFALL #4 – YOU REMAIN INCOMMUNICADO



Once the project really gets going in Project Execution, it is very easy to focus internally – on Project Team dynamics, on technical challenges, on deliverables and schedules – to the exclusion of everything else; yet it is also important to pay attention to the externals. **After all, as Project Manager, you are the main link between the project cocoon and the big world outside.**

Executing all aspects of your Communications Plan is your responsibility, and nothing is more important than accurate and frequent status reporting. A Project Status Report is the most effective way for all Stakeholders to remain closely connected to and aware of the project’s progress – and potential problems.

The two most important questions the Project Status Report must answer are:

1. What is the latest, best available estimate for the remaining work, and how does it compare with the schedule?

2. What issues have come up that may affect the project Cost, Scope, Schedule, or Quality, and what is being done about them?

These questions are far more important to the eventual success of the project, and to minimizing surprises along the way, than the usual dissertations on project status and enumerations of immediate tasks at various levels – not that the status report should not include them. But after collecting, analyzing and evaluating the status information, the Project Manager’s job is to make decisions or suggestions regarding changes to be made – if necessary – to keep the project on track.

Of course, the best status report in the world will make no impact if there is no one there to hear it. A regularly scheduled status meeting, attended by as many members of the Project Team as practical, dedicated to a thorough review of the status report, is irreplaceable.

#### PITFALL #5 – YOU CONFUSE DESIRE WITH ABILITY



Your customers sincerely want what your project is developing. They demonstrated their desire for it by committing funds to the project; by allocating resources to the Project Team; and by devoting time to meetings, reviews, and other project-related activities. And yet they may be totally unprepared to actually make use of it, or even to implement it at all.

But whose fault do you think it will be when they realize their inability to utilize it? That’s right, yours. So it is up to you to make sure that someone determines organizational readiness for the product or service, and that someone prepares for a smooth transition of the product from the Project Team to the Performing Organization. Notice that it does not say you have to do it – just that you have to make sure it gets done. And that requires including in the Project Plan that organizational readiness assessment and transition planning need to be done.

### PITFALL #6 – THEY BLINDED YOU WITH SCIENCE (OR TECHNOLOGY)



There is no law that says that a Project Manager must be a master of whatever technology the project employs. Nevertheless, you will be called upon to manage numerous technical decisions on the project.

A frequent pitfall in those circumstances is over-delegating those decisions to the more technical members of the team, or accepting the recommendations of your technical experts on blind faith, both of which result in unacceptable loss of control. Instead, make the team explain the issue and alternative solutions to you. As a reasonably intelligent person, you should be able to understand the concepts by listening and asking questions. If, however, the technical folks can't explain to your satisfaction why they are advocating a certain position – watch out! It is indicative of a position dictated more by desire than by reason, or of poor understanding on the part of the supposed experts. Get a second opinion, and trust your own instincts.

### PITFALL #7 – THE ENDLESS APPROVAL CYCLE LEADS YOU BY THE NOSE



~~You thought you were smart. You thought you were ready. You knew how finicky your Customer was, so you built into your schedule not one, not two, but three approval cycles – one for an informal pre-screen, one for a formal review, and the last one for formal approval. You built in time for re-work based on the review. You even indicated in your acceptance parameters that you were only willing to wait so many days for the approval. Yet here you are, a month and a half past the first scheduled deliverable – which your team presented right on time – and you still don't have the proper signatures on the approval form. What happened?~~

Any of a number of things. You may be stuck in a never-ending fine-tuning cycle (that's like hanging a picture for your mother-in-law: "A little more to the left. No, that's too far! Back a bit to the right. Hmm... How about a little higher? No, that's too high!" etc., etc.) Or you may be chasing signatures in a circle, with every person telling you that he can't sign until the other person does (that's like trying to solve a problem with your PC: "Install an updated driver before we swap the modem"

– "No, flash the chip set before we upgrade the driver" – "No, update the operating system first!" – "Looks like you need to replace the motherboard.") Or the exalted Grand Poobah of the

Customer tribe may just be too busy to pay any attention to your puny little project.

But the common thread among all the possibilities is that you are just being too darned nice. You may have said that you would only allow five business days for deliverable approval, but what do you do after the five days expire? You may have asked for particular signatures on the approval form, but what do you do if the signatures do not appear?

You fight the approval war on two levels: tactical, and operational. Tactically, you should use two weapons: status report and change control. Highlight the acceptance cycle in your Status Report, and start the change control process when your criteria are not met. Be tough, and insist on the rules being followed. And finally, from the operational perspective, you should just make such a nuisance of yourself that the approvers would sign anything rather than be pestered by you again.



**How can a Project Manager manage the Project Schedule if team members don't accurately report when they are behind?**

The key to accurate forecasting and precise reporting is the “Estimate to Complete” column on the Progress Report. The team members don't have to report that they are behind; you (and most likely, your team leaders) need to make sure that they come up with an accurate estimate to complete, and the math will tell you the rest. How do you know if their estimate is accurate? Unless you (or your team leader) are involved in the details of the task, and understand the technology used to perform it, you won't – the first time.

By next time, you will know the team member's bias – unbridled optimism (forecasting too little), gloomy pessimism (forecasting way too much) or random don't-have-a-clueism (forecasting erratically), so you can “guide” them to a better estimate and then hold them accountable for it.

The thing to remember is, you can't just take what you're given. You have to question the estimate to complete, you have to compare it with other tasks, and you have to get it to the point where all of you are comfortable with it.