



CDC UNIFIED PROCESS PRACTICES GUIDE



CHANGE MANAGEMENT

Document Purpose

The purpose of this document is to provide guidance on the practice of **Change Management** and to describe the practice overview, requirements, best practices, activities, and key terms related to these requirements. In addition, templates relevant to this practice are provided at the end of this guide.

Practice Overview

For any given project, a key management component is the practice of managing change. Change management, also known as change control, is an iterative process that continues throughout the project lifecycle. All projects, regardless of type or size, should maintain a change log and regularly manage requested changes. As change requests are submitted and resolved, the updated change log provides historical documentation of requested changes that have been addressed throughout the project's life.

Project Management Institute (PMI) Project Management Body of Knowledge (PMBOK) defines a change management system as a collection of formal documented procedures that define how project deliverables and documentation will be controlled, changed, and approved.

This practices guide focuses on change management; however, it is important to distinguish the practice of change management from the practice of configuration management. This practices guide focuses specifically on change management. For more information on configuration management search for "define: configuration management" using Google.

The primary purpose of a change management system is to provide a standard process for submitting, documenting, and reviewing changes in preparation for prioritizing those corrections/enhancements. It identifies what changes to make, the authority for approving changes, the support for implementing changes, and the process for formal deviations and waivers from the original agreed upon requirements. The change management process establishes an orderly and effective procedure for tracking the submission, coordination, review, evaluation, categorization, and approval for release of all changes to the project's baselines. The change management system defines the guidelines for the management of project change and describes in detail how changes will be documented, organized, and managed.

When managing competing requirements evaluate how a change in one constraint affects one or both of the remaining two. Analyze scope, time, and cost to understand the costs and benefits of accepting a requested change.

Each change request is unique and the proper evaluation of each change request is a vital management practice. The way that change requests are evaluated depends on their importance and urgency with the objective of:

- Understanding the impact of the changes on all affected parties
- Ensuring that all eventualities are considered
- Consolidating all the individual impact analyses for the purpose of making an informed management decision
- Ensuring that due diligence has been exercised in the evaluation of the change request
- Ensuring that all affected parties have been consulted
- Evaluating the impact of the change being considered and weigh the cost against the benefits of the original change request

There are two types of change to contend with during the life of a project: product change and project change. Within each of these two categories scope, time, duration, cost, resource, deliverable, product, process, and quality all need to be considered when evaluating a change request.



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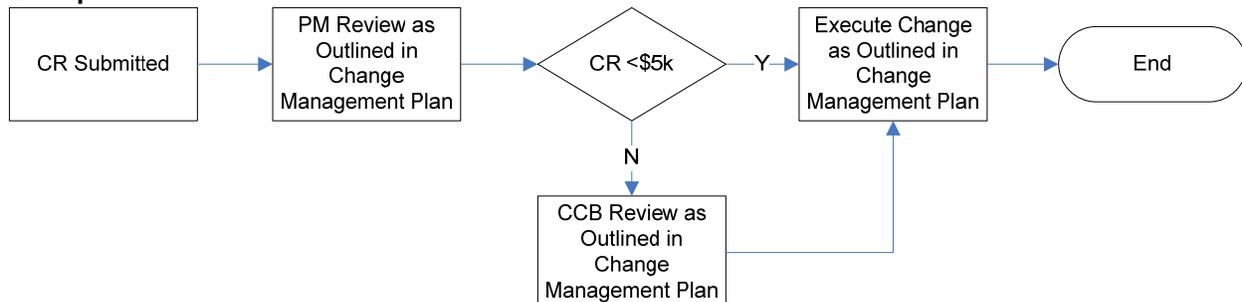
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- **Product Change** - PMI PMBOK defines a product as an artifact that is produced, is quantifiable, and can be either an end item in itself or a component item. Product change impacts the product's deliverables, functionality, quality, etc. A product change may be large enough to also have an impact on project change.
- **Project Change** – PMI PMBOK defines a project as a temporary endeavor undertaken to create a unique product, service or result. Project change impacts the project's scope, time, duration, cost, resources, processes, etc.

To more easily manage change within a project, especially large complex projects, it is a common practice to establish thresholds within the change management system that define who has authority to approve what level of change. Changes with a larger size or scope impact require escalation to a higher level for approval. As an example, a project manager may be authorized to personally approve changes with a project impact of less than \$5,000. Changes with a project impact greater than \$5,000 would require approval by a Change Control Board (CCB).

A CCB is a formally constituted group of stakeholders responsible for reviewing, evaluating, approving, delaying, or rejecting changes to the project. All decisions and recommendations related to change requests are recorded. The project team often works with the CCB to communicate details regarding requested changes and to help evaluate the most appropriate response.

Example:



A Change Management Plan is an ongoing process and is outlined during the Planning Phase of the project and describes the steps that will be followed to initiate, review, and resolve change requests within the project. Its intended audience is the project manager, project team, project sponsor and any senior leaders whose support is needed to carry out the plan. Change management is an ongoing process that continues throughout the project lifecycle.

Requirements

All projects, regardless of type or size, should maintain a change log and regularly manage requested changes. As change requests are submitted and resolved, the change log is updated, and thus serves as a historical record of requested changes that have been addressed throughout the project's life.

Best Practices

The following are recommended best practice approaches to change management:

- **Document** - Change requests should be centrally documented using some type of log. A change request log template is provided at the end of this guide and should be used in the absence of something more sophisticated available to the project team.
- **Unique Entries** - Each change request should be recorded as a single line item. Do not combine multiple requests under one change request ID.
- **Iterative** - Change management is an ongoing, iterative process conducted throughout the project lifecycle.



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- **Review** - A regular review of change requests is good project management practice. Depending on the complexity of the project the review process may happen daily but should happen at least weekly for even the simplest projects.
- **Change Management System** - A formally defined change management system should be documented and communicated to the project team
- **Thresholds** - Establish agreed upon thresholds outlined within the change management system that defines who has the authority to approve what types of change.
- **Analysis** - Analyze the impact of approving a change request on the product, project, and program as well as the impact of not approving the change request.
- **Triple Constraints** - Analyze change requests based on scope, time, and cost impact to the project. When managing competing requirements, evaluate how a change in one constraint affects one or both of the remaining two. This evaluation will help the project understand the costs and benefits of accepting a requested change.
- **Acceptance Criteria** - Define and document criteria for acceptance of deliverables outlined to in the functional specifications for the approved change request.
- **Back Out Plan** - Define and document criteria for backing out the functionality of the approved change request in case of unexpected consequences.
- **Test Plan** - The purpose of the test plan is to communicate the intent of the testing activities for the approved change request. It is critical that this document be created as early as possible after the change has been approved.
- **Evaluate Risk** - When identifying risks associated with making a requested change, consider what can go wrong. Identify potential barriers to success so that risk can be reduced or eliminated. Identify events which may occur that could decrease the likelihood of delivering the change request.
- **Organizational Change** - When evaluating change requests identify the organizational change impact that authorizing that change may have on the project, customer, or organization. For more information on organizational change management search for “define: change management” using Google.
- **Production, Operations & Maintenance** – When moving into the Operation and Maintenance phase of a project life cycle, change management may be handled differently than during development. Reevaluate the change management plan well in advance of this and, if necessary, make updates to accommodate any differences in approach, process, management, etc.

Practice Activities

- Identify a change requirement.
- Determine how the requirements of the requested change might be met.
- Obtain approval to move forward with the change.
- Manage the process of change through its implementation.
- Manage all the artifacts related to the change.

Practice Attributes

This section provides a list of practice attributes to help project teams determine when and how Change Management impacts a project.

Practice Owner	CDC UP Project Office – NCPHI
Criteria	All projects regardless of type or size should document how change is defined and managed through the project life cycle.
Estimated Level of Effort	Minimal
Prerequisites	N/A
Practice	N/A



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Dependencies	
Practice Timing in Project Life Cycle	The change management approach for the project is outlined in the planning phase, but change management is an ongoing activity that takes place throughout the entire project life cycle.
Templates/Tools	Change Management Plan; Change Management Log; Change Management Checklist; Change Request Form
Additional Information	N/A

Key Terms

Follow the link below to for definitions of project management terms and acronyms used in this document.
<http://www2.cdc.gov/cdcup/library/other/help.htm>

Related Templates/Tools

Below is a list of template(s) related to this practice. Follow the link below to download the document(s).
<http://www2.cdc.gov/cdcup/library/matrix/default.htm>

- Change Management Plan Template:
- Change Management Log to record and manage change:
- Checklist for effective Change Management:
- Change Request Form example: