



## Chapter XI

# Change and Closeout Management

*You must welcome change as the rule, but not as your ruler.*

(Denis Waitley)

Change is a fact of life for most projects, particularly IT projects. *The biggest single cause of project overruns is changes in scope* (Hallows, 1998). Change can be for the good or the bad, but change is to be expected, and change has to be managed. This chapter is concerned with that management process.

## Project Changes

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Resistance to change is usually rooted in fear of the unknown as PMs and people in general prefer stability and predictability. However, in order for a project to survive, PMs must deal with changes effectively. Many projects fail not in their goals and directions, but in their plan (or lack of a plan) for dealing with changes. Not having a formal change control system “guarantees a project will be plagued by chaos, errors, permanent damage, low productivity, and unmanageable software evolution” (Brown, 1998). *Formal change control is vital in projects involving an external performing or benefiting organization so that one organization can be appropriately compensated for the additional effort.*

Change can arise for many reasons; in IT projects, the leading sources or indicators of change are:

- The customer (benefiting organization) is unsure of their needs
- The customer is unsure as to how the needs should be delivered
- The performing organization is unclear to the details of the customer's needs
- The performing organization is not sure how to do the work
- The deployment environment has changed
- Planned methods or algorithms prove unsuitable
- Better methods of building or deploying the system have come forward
- The business case for the project has changed
- Market demographic and/or geographic shifts
- The sociopolitical environment for the project has changed
- The corporate environment has changed (reorganizations, mergers, acquisitions)

Changes in a project can come in any part of the project from early planning through project closeout; in IT projects, most changes come later in a project such as during implementation, testing and deployment. *Changes coming later in a project are usually much more expensive than if that need for a change were identified earlier.* A change in one part of the project deliverable may cause changes in many other parts of the project as well. So, as was discussed earlier in this book, it is very important to take steps early to flush out user requirements and potential changes. Validation of the preliminary product manifestations with quality stage gates using methods as prototypes, use case walkthroughs with customers, and design reviews with appropriate stakeholders will minimize changes later in a project.

Project change management usually concerns changes to scope, but other changes also need to be managed. Normally, change control systems are set up to deal with only scope and deliverable change; other project change is usually handled via risk management, as was discussed earlier in this book. Scope management in general includes the processes necessary to make sure that all project work is addressed and that extra work is not done. Scope change control should be planned and procedures defined early in the project (charter, SOW, contract, overall project plan). Change control is concerned with the following (PMI, 2000):

- Influencing the factors that cause change control to ensure that changes are beneficial
- Determining that a scope change has occurred
- Managing the actual changes when and if they occur

In the IT environment, the term *change control* can be confusing because those words are often applied to the control of changes to program source code and/or changes to a target hardware/software deployment platform. In this book, the control of source code and related artifacts will be called version control, and the control of hardware and dependent software components on the deployment platforms will be called configura-

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