Chapter 28
Change happens

Objectives

- Exploring the formal change control practices and how agile projects incorporate changes.

- Student should enhance why we need to manage changes, what they have to do when change happens.

Contents

- Why manage changes?
- Change control policy
- Basic concepts of the change control process
- A change control process description
- The change control board
- Change control tools
- Measuring change activity
- Change impact analysis
- Change management on agile projects

Why manage changes?

- Proposed requirements changes are thoughtfully evaluated before being committed to.
- Appropriate individuals make informed business decisions about requested changes.
- Change activity is made visible to affected stakeholders.
- Approved changes are communicated to all affected participants.
- The project incorporates requirements changes in a consistent and effective fashion.

Change control policy

- All changes must follow the process. If a change request is not submitted in accordance with this process, it will not be considered.
- No design or implementation work other than feasibility exploration will be performed on unapproved changes.
- Simply requesting a change does not guarantee that it will be made. The project's change control board (CCB) will decide which changes to implement.
- The contents of the change database must be visible to all project stakeholders.
- Impact analysis must be performed for every change.
- Every incorporated change must be traceable to an approved change request.
- The rationale behind every approval or rejection of a change request must be recorded.

A change control process description

- Entry criteria, the conditions that must be satisfied before the process execution can begin
- The various tasks involved in the process, the project role responsible for each task, and other participants in the task
- Steps to verify that the tasks were completed correctly
- Exit criteria, the conditions that indicate when the process is successfully completed

A change control process description

1. Purpose and scope
2. Roles and responsibilities
3. Change request states
4. Entry criteria
5. Tasks
   - 5.1 Evaluate change request
   - 5.2 Make change decision
   - 5.3 Implement the change
   - 5.4 Verify the change
6. Exit criteria
7. Change control status reporting

Appendix: Attributes stored for each request

FIGURE 28-1 Sample template for a change control process description.

- CCB composition
  - Project or program management
  - Business analysis or product management
  - Development
  - Testing or quality assurance
  - Marketing, the business for which the application is being built, or customer representatives
  - Technical support or help desk
- CCB charter
  - Making decisions
  - Communicating status
- Renegotiating commitments

Change control tools

- To support your change process, look for a tool that:
  - Allows you to define the attributes that constitute a change request.
  - Allows you to implement a change request life cycle with multiple change request statuses.
  - Enforces the state-transition model so that only authorized users can make specific status changes.
  - Records the date of each status change and the identity of the person who made it.
  - Provides customizable, automatic email notification when an Originator submits a new request or when a request's status is updated.
  - Produces both standard and custom reports and charts.

Measuring change activity

- Tracking the following aspects of your requirements change activity:
  - The total number of change requests received, currently open, and closed
  - The cumulative number of added, deleted, and modified requirements
  - The number of requests that originated from each change origin
  - The number of changes received against each requirement since it was baselined
  - The total effort devoted to processing and implementing change requests

Change impact analysis

- Impact analysis procedure
- Impact analysis template

- One of the 12 principles of agile software development is "Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage"
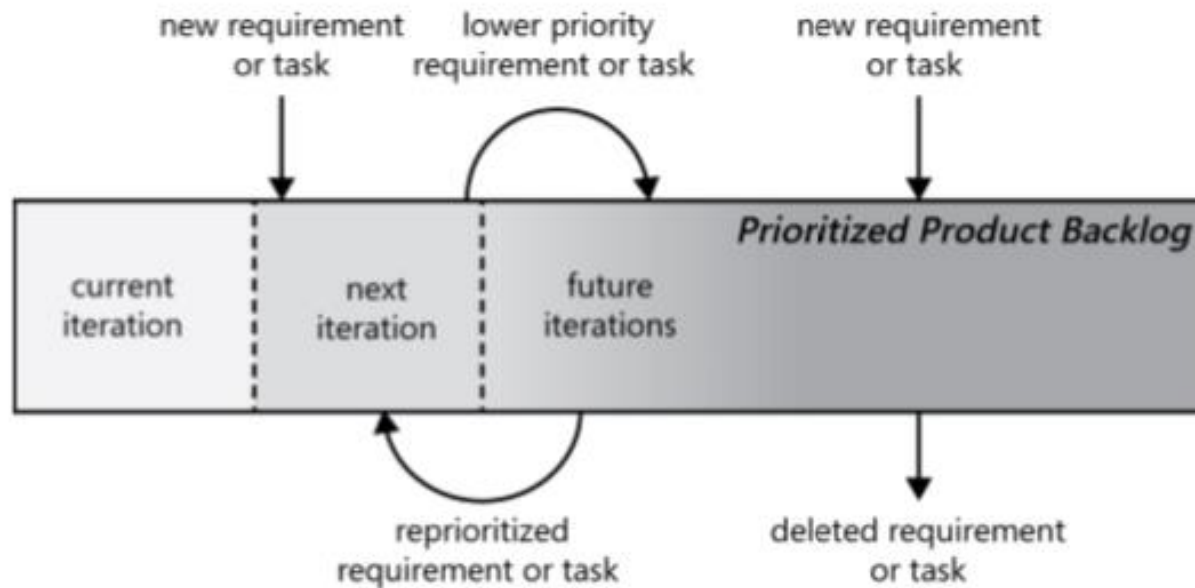

FIGURE 28-9 Agile projects manage change with a dynamic product backlog.