
Chapter 31

Improving your requirements processes

- Student could understand how requirements relate to various other project processes and stakeholders.
- Student enhance some basic concepts about software process improvement and a suggested process improvement cycle.
- Student enhance a list several useful requirements “process assets” that yorganization should have available.
- Enhance a process improvement road map for implementing improved requirements engineering processes.

- How requirements relate to other project processes
- Requirements and various stakeholder groups
- Gaining commitment to change

How requirements relate to other project processes

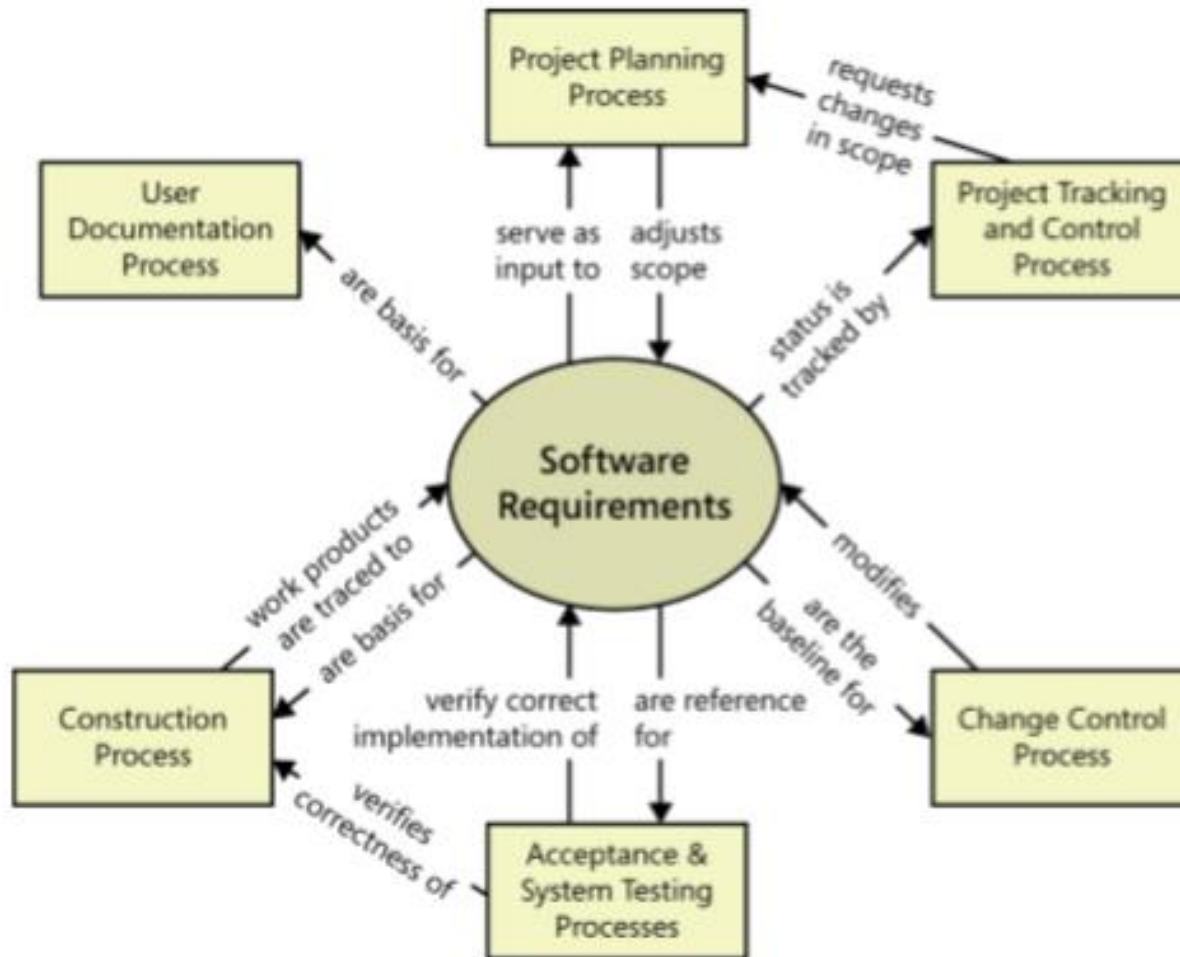


FIGURE 31-1 Relationship of requirements to other project processes.

Requirements and various stakeholder groups

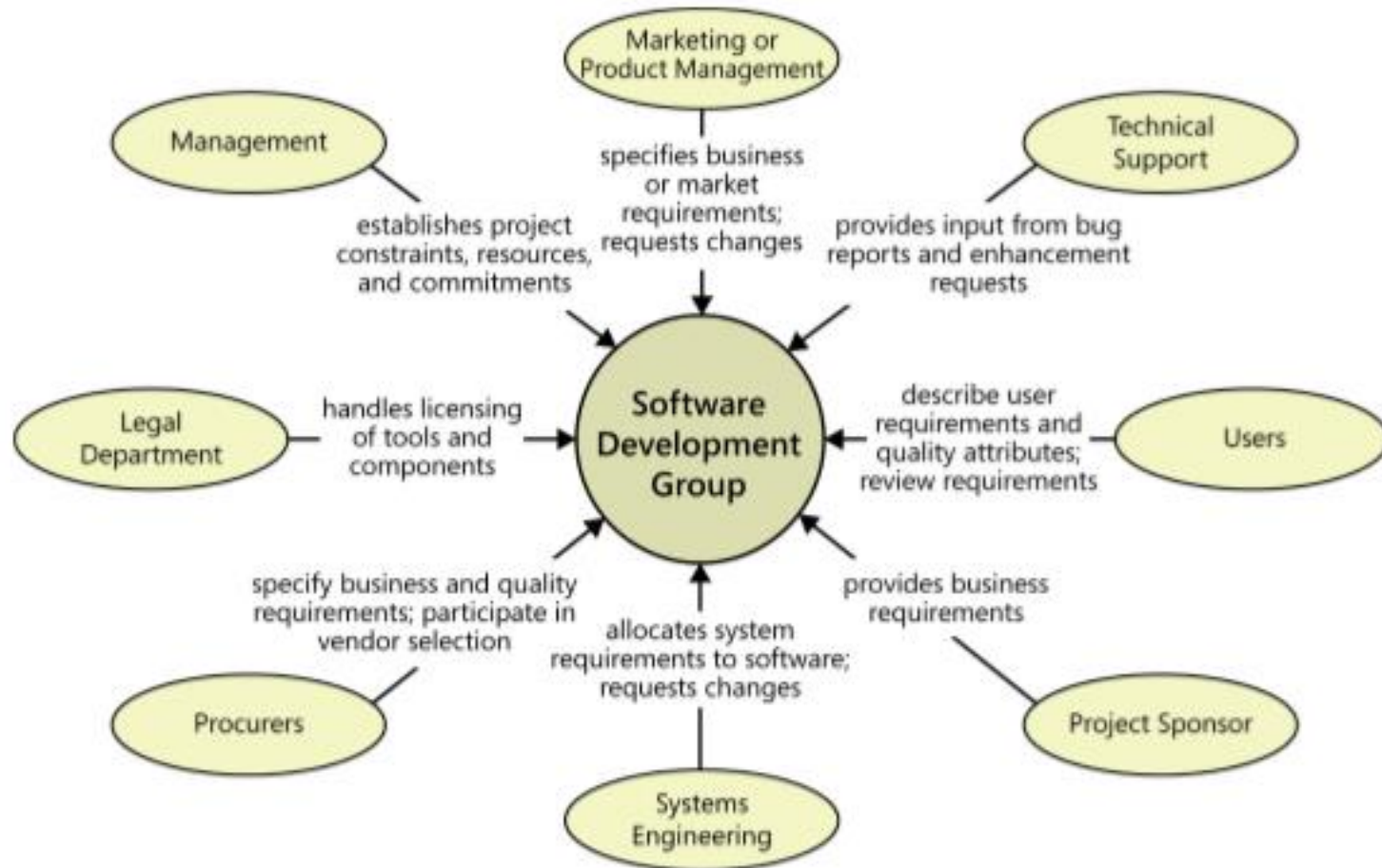


FIGURE 31-2 Requirements-related contributions from various stakeholders to the software development team.

1. Asking that requirements for a project be documented in an appropriate form.
2. Working with the business analyst to provide business requirements for each project.
3. Expecting requirements to be reviewed by appropriate stakeholders, including themselves when appropriate.
4. Asking stakeholders to agree on requirements before implementing each portion of the solution.
5. Ensuring that project plans include time and resources for requirements tasks.
6. Collaborating with other key stakeholders to gain their participation in requirements activities.
7. Establishing effective mechanisms and policies to handle requirements changes.
8. Investing in training, tools, books, and other resources for those involved in requirements activities.
9. Funding and staffing activities to improve the organization's requirements processes.
10. Making the time available for team members to spend on requirements process improvement activities.

FIGURE 31-3 Some behaviors that indicate management's commitment to excellent requirements processes.

Fundamentals of software process improvement

- Process improvement should be evolutionary and continuous
- People and organizations change only when they have an incentive to do so
- Process changes should be goal-oriented
- Treat your improvement activities as mini-projects.

Root cause analysis

- Root cause analysis seeks to identify the underlying factors that contribute to an observed problem, distinguishing symptoms from their causes

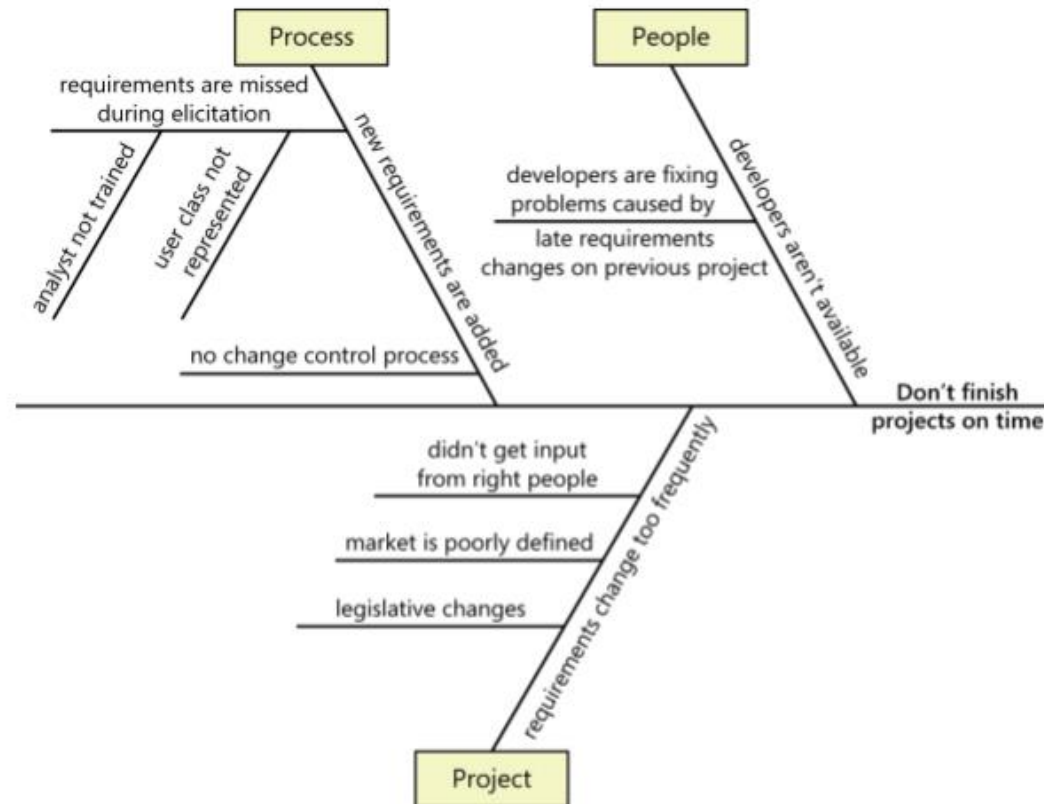


FIGURE 31-4 A cause-and-effect diagram identifying root causes for identified problem symptoms.

The process improvement cycle

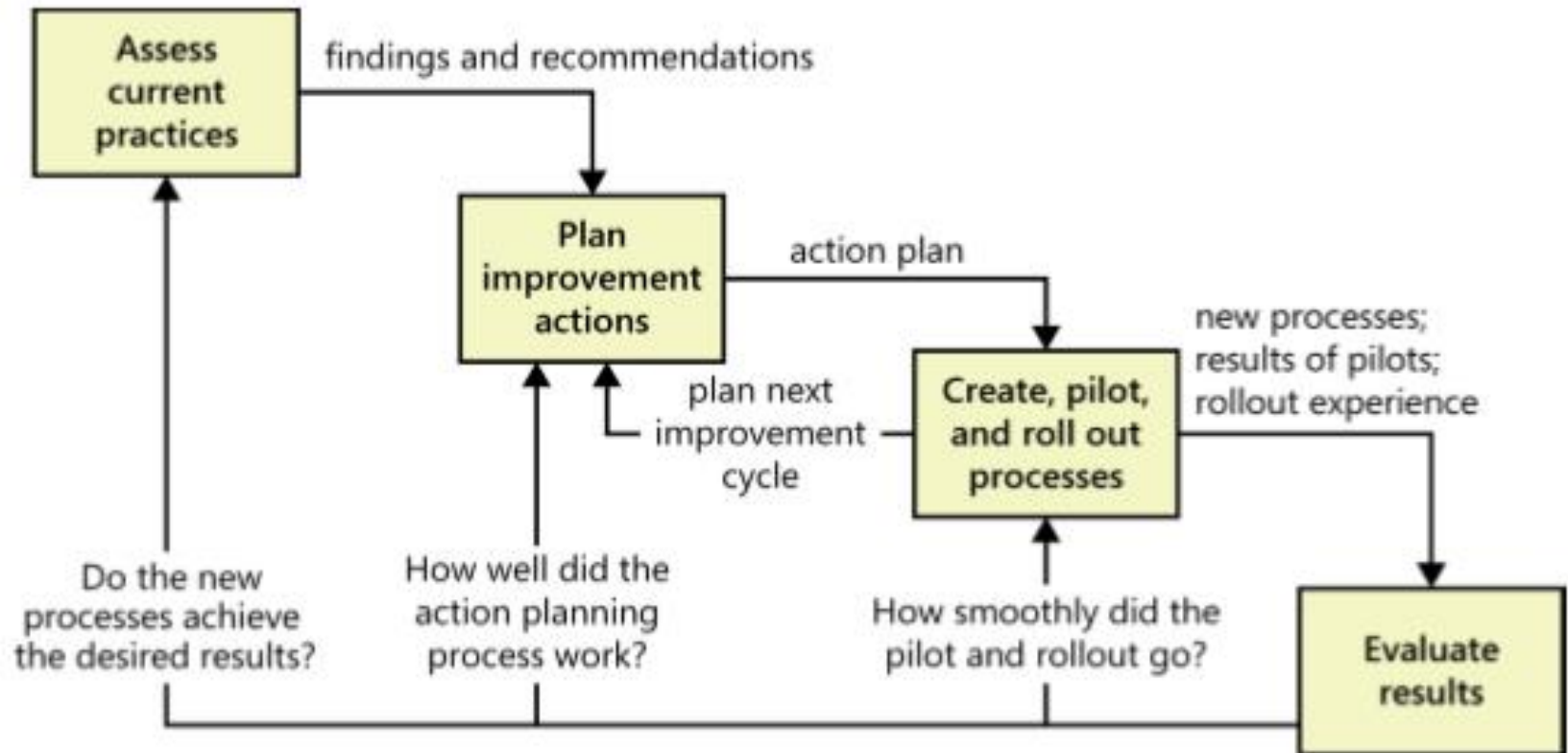


FIGURE 31-5 The software process improvement cycle.

Requirements engineering process assets

TABLE 31-1 Types of process assets

Type	Description
Checklist	A list that enumerates activities, deliverables, or other items to be noted or verified. Checklists are memory joggers. They help ensure that busy people don't overlook important details.
Example	A representative of a specific type of work product. Accumulate and share good examples as your project teams create them.
Plan	An outline of how an objective will be accomplished and what is needed to accomplish it.
Policy	A guiding principle that sets a management expectation of behaviors, actions, and deliverables. Processes should enable satisfaction of the policies.
Procedure	A step-by-step description of the sequence of tasks that accomplishes an activity. Describe the tasks to be performed and identify the project roles that perform them. Guidance documents can support a process or procedure with tutorial information and helpful tips.
Process description	A documented definition of a set of activities performed for some purpose. A process description might include the process objective, key milestones, participants, communication steps, inputs and outputs, deliverables, and how to tailor the process to different project situations.
Template	A pattern to be used as a guide for producing a work product. Templates for key project documents provide many "slots" for capturing and organizing information. Guidance text embedded in the template will help the document author use it effectively. Other templates define a structure that is useful for writing a specific type of information, such as a functional requirement, quality attribute, business rule, or user story.

Requirements engineering process assets

Requirements Development Process Assets	Requirements Management Process Assets
<ul style="list-style-type: none"> • Requirements development process • Requirements allocation procedure • Requirements prioritization procedure • Vision and scope template • Use case template • Software requirements specification template • Requirements review checklist 	<ul style="list-style-type: none"> • Requirements management process • Requirements status tracking procedure • Change control process • Change control board charter template • Requirements change impact analysis checklist • Requirements tracing procedure

FIGURE 31-8 Key process assets for requirements development and requirements management.

Creating a requirements process improvement road map

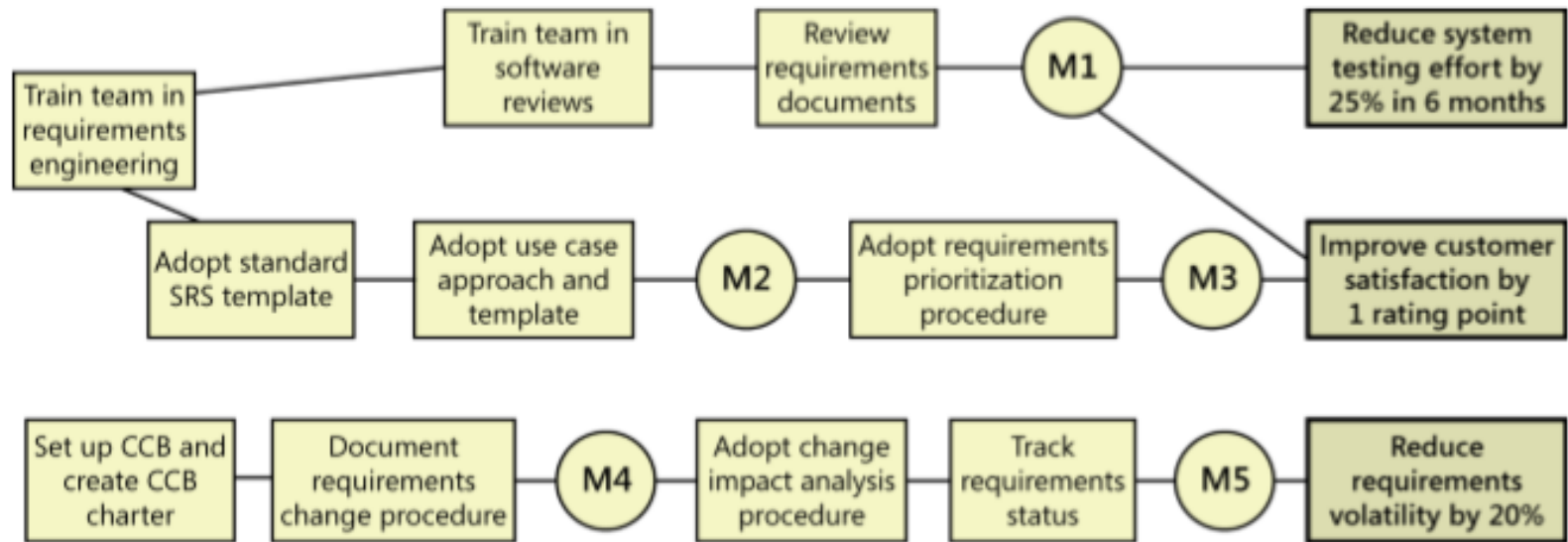


FIGURE 31-9 Sample requirements process improvement road map.