

Purpose

The purpose of Requirements Management (REQM) is to manage the requirements of the project's products and product components and to identify inconsistencies between those requirements and the project's plans and work products.

Applicability

This process applies to all technical and non technical requirements received or generated by the project.

Accountable Role

The team member tasked with documenting and managing the project's requirements.

Overview

The Requirements Management process manages all requirements received or generated by the project, including both technical and non technical requirements as well as those requirements levied on the project by the organization.

In executing this process, the project will take appropriate steps to ensure that the agreed-upon set of requirements is managed to support the planning and execution needs of the project. When a project receives requirements from an approved requirements provider, the requirements are reviewed with the requirements provider to resolve issues and prevent misunderstanding before the requirements are incorporated into the project's plans. Once the requirements provider and the requirements receiver reach an agreement, commitment to the requirements is obtained from the project participants. The project manages changes to the requirements as they evolve and identifies any inconsistencies that occur among the plans, work products, and requirements.

Part of the management of requirements is to document requirements changes and rationale and maintain bidirectional traceability between source requirements and all product and product-component requirements.

All development projects have requirements. In the case of a project that is focused on maintenance activities, the changes to the product or product components are based on changes to the existing requirements, design, or implementation. The requirements changes, if any, might be documented in change requests from the customer or users, or they might take the form of new requirements received from the requirements development process. Regardless of their source or form, the maintenance activities that are driven by changes to requirements are managed accordingly.

Related Processes

Applies to CMMI Level 2

- Refer to the Project Planning process for more information about how project plans reflect requirements and need to be revised as requirements change.
- Refer to the Configuration Management process for more information about baselines and

- controlling changes to configuration documentation for requirements.
- Refer to the Project Monitoring and Control process for more information about tracking and controlling the activities and work products that are based on the requirements and taking appropriate corrective action.

Specific Goals and Practices

These specific goals and practices will be implemented when managing a project's requirements.

SG 1 Manage Requirements

The project will maintain a current and approved set of requirements over the life of the project by doing the following:

- Managing all changes to the requirements,
- Maintaining the relationships between the requirements, project plans, and work products,
- Identifying inconsistencies between requirements, project plans, and work products, and
- Taking corrective action.

SP 1.1 Obtain an Understanding of Requirements

As the project matures and requirements are derived, all activities or disciplines will receive requirements. To avoid requirements creep, criteria will be established to designate appropriate channels, or official sources, from which to receive requirements. The receiving activities will conduct analyses of the requirements with the requirements provider to ensure that a compatible, shared understanding is reached on the meaning of the requirements. The result of this analysis and dialog is an agreed-to set of requirements.

Work Products include the following:

- Lists of criteria for distinguishing appropriate requirements providers,
- Criteria for evaluation and acceptance of requirements,
- Results of analyses against criteria, and
- An agreed-to set of requirements.

SP 1.2 Obtain Commitment to Requirements

Requirements evolve throughout the project. As the requirements evolve project participants will commit to the current, approved requirements and the resulting changes in project plans, activities, and work products.

Work Products include the following:

- Requirements impact assessments and
- Documented commitments to requirements and requirements changes.

SP 1.3 Manage Requirements Changes

During the project, requirements change for a variety of reasons. As needs change and as work proceeds, additional requirements are derived and changes may have to

be made to the existing requirements. It is essential to manage these additions and changes efficiently and effectively. To effectively analyze the impact of the changes the source of each requirement will be tracked and the rationale for any change will be documented. It is often necessary to track appropriate measures of requirements volatility to judge whether new or revised controls are necessary.

Work Products include the following:

- Requirements status,
- Requirements database, and
- Requirements decision database.

SP 1.4 Maintain Bidirectional Traceability of Requirements

Bidirectional traceability of requirements will be maintained for each level of product decomposition. When the requirements are managed well, traceability can be established from the source requirement to its lower level requirements and from the lower level requirements back to their source. Such bidirectional traceability helps determine that all source requirements have been completely addressed and that all lower level requirements can be traced to a valid source.

Requirements traceability also covers the relationships to other entities such as intermediate and final work products, changes in design documentation, and test plans. The traceability will cover horizontal relationships, such as across interfaces, as well as vertical relationships. Traceability is required when conducting the impact assessment of requirements changes on the project's activities and work products

Work Products include the following:

- Requirements traceability matrix and
- Requirements tracking system.

SP 1.5 Identify Inconsistencies Between Project Work and Requirements

Inconsistencies between the requirements and the project plans and work products will be documented. The corrective action to fix them will be initiated.

Work Products include the following:

- Documentation of inconsistencies including sources, conditions, and rationale and
- Corrective actions.

Generic Goals and Practices

Refer to the Generic Goals and Practices listed below for additional information.

GG 2 Institutionalize a Managed Process

- GP 2.1 Establish an Organizational Policy
- GP 2.2 Plan the Process
- GP 2.3 Provide Resources

- GP 2.4 Assign Responsibility
- GP 2.5 Train People
- GP 2.6 Manage Configurations
- GP 2.7 Identify and Involve Relevant Stakeholders
- GP 2.8 Monitor and Control the Process
- GP 2.9 Objectively Evaluate Adherence
- GP 2.10 Review Status with Higher Level Management

Change Control
Changes to this process must be approved by the <name of progress group>.

Revision History				
Rev. No.	Reason for Change	Revised By	Approved By	Date