# Applying CMMI to an Organization

Your company has realized that the software development department shall improve on the capability to manage requirements. The target was set to plan activities to reach capability level 2 for the process area requirements management.

Task:

Which concrete actions do you propose to the organization? Please interpret the process goals / practices and generic goals / practices.

## Requirements Management (REQM) Process Goals:

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.

## Introduction

Requirements management processes manage all requirements received or generated by the project, including both technical and nontechnical requirements as well as those requirements levied on the project by the organization. In particular, if the Requirements Development process area is implemented, its processes will generate product and product component requirements that will also be managed by the requirements management processes. Throughout the process areas, where we use the terms product and product component, their intended meanings also encompass services and their components. When the Requirements Management, Requirements Development, and Technical Solution process areas are all implemented, their associated processes may be closely tied and be performed concurrently.

The project takes appropriate steps to ensure that the agreed-on 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 to maintain bidirectional traceability between source requirements and all product and product component requirements (See the definition of "bidirectional traceability" in the glossary.)

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.

Sub-Goals (SG) and Sub-Practices (SP):

SG 1 Manage Requirements

SP 1.1 Obtain an Understanding of Requirements:
Develop an understanding with the requirements providers on the meaning of the requirements

SP 1.2 Obtain Commitment to Requirements
Obtain commitment to the requirements from the project participants.

SP 1.3 Manage Requirements Changes
Manage changes to the requirements as they evolve during the project.

SP 1.4 Maintain Bidirectional Traceability of Requirements
Maintain bidirectional traceability among the requirements and work products.

SP 1.5 Identify Inconsistencies Between Project Work and Requirements
Identify inconsistencies between the project plans and work products and the requirements.

## Generic Goals and Practices

| Capability Level | Generic Goals | Generic Practices | |
|---|---|---|---|
| 1 | Achieve Specific Goals | GP 1.1 | Perform Base Practices |
| 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 Mgmt |
| 3 | Institutionalize a Defined Process | GP 3.1 | Establish a Defined Process |
| | | GP 3.2 | Collect Improvement Information |
| 4 | Institutionalize a Quantitatively Managed Process | GP 4.1 | Establish Quantitative Objectives for the Process |
| | | GP 4.2 | Stabilize Sub-process Performance |
| 5 | Institutionalize an Optimizing Process | GP 5.1 | Ensure Continuous Process Improvement |
| | | GP 5.2 | Correct Root Causes of Problems |