# Level three*

Frank Niessink

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## Abstract

This proposal contains a first sketch of how the third level of the IT Service CMM might look.

## Change history

| Date | Version | Changes |
|---|---|---|
| 01-12-2000 | 0.1 | Initial version |

*Draft, version 0.1.

# Contents

# 1 Introduction

During the Kwintes project [1], a first version of the IT Service Capability Maturity Model was developed. The Kwintes project ended in 1999, and at that time the IT Service CMM was not finished. The model description (version 1.0-L2 [2]) contains an overview of all five levels of the model, and detailed descriptions of the level two key process areas.

This document contains a first sketch of how the third level of the IT Service CMM might look. This overview is different than the overview of level three published in [2].

# 2 General description of level two and three

The IT Service CMM is a Capability Maturity Model similar to the Software CMM version 1.1 [3]. Its structure is equal to the structure of the Software CMM, meaning that both models have five maturity levels. Each maturity level contains a set of key process areas that address goals that an organization should satisfy to reach that maturity level. In both models, the first maturity level is an initial level, at which all organizations reside that have not implemented all level two key process areas. Hence level one does not contain nay key process areas.

The second level is called the 'repeatable' level. This means that an organization can repeat earlier successes in similar circumstances. In case of the Software CMM, an organization at level two should be able to successfully develop a software system for a customer, if the organization has developed similar types of systems for similar customers. In case of the IT Service CMM this means that an organization residing at level two of the IT Service CMM is able to successfully deliver services to customers, if they have delivered similar services to similar customers before. According to the current version (L2-1.0) of the IT Service CMM, a service provider needs to implement the key process areas Service Commitment Management, Service Delivery Planning, Service Tracking and Oversight, Subcontract Management, Configuration Management, Event Management and Service Quality Assurance to acquire this level of maturity.

The third level of Capability Maturity Models, called the 'defined' level, is aimed at reaching standardization of the processes within the organization. In the Software CMM, all projects use an approved, tailored version of the organization's standard software process for developing and maintaining software. These standard processes are maintained and improved, an organization wide training program is established to ensure that managers and technical staff are able to fulfill their assigned roles, cooperation between different groups is coordinated, etc.

The next section further elaborates on the level three characteristics.

# 3 Level three

Level three of the IT Service CMM is aimed at standardization of services and processes.

An IT service provider at level three has a general description of the services it can provide. This description is called a service catalog. This service catalog contains a specification of the services in terms of benefits for the customer. Also, service levels are included that the IT service provider can deliver, and the costs of the services. The decision *what* services to include in the catalog is based on issues external to the IT Service CMM, such as marketing research or contractual obligations (in case of in-house IT service providers). The service catalog is continuously updated with experiences from the actual delivery of services. The key process area that covers these activities is called 'Organization Service Definition' for now (because of the similarity with 'Organization Process Definition').

At level three, the organization uses a standard process. The actual development and maintenance of the standard process is the goal of the key process area 'Organization Process Definition'. What processes the organization needs depends on the services defined in the 'Organization Service Definition' key process area. Making sure all organizational units are using the standard process, and assessing service delivery, is the aim of 'Organization Proces Focus'. These two key process areas are similar to their counterparts in the Software CMM.

Each service delivered in the IT Service CMM follows a tailored version of the standard process. This tailoring is necessary to adapt the standard process to the service commitments at hand. For example, choosing a particular methodology is part of this tailoring step. Tailoring is done in 'Integrated Service Management' key process area. This is the counterpart of the S-CMM key process are 'Integrated Software Management'.

The tailored process is input for the 'Service Delivery' kpa, together with the service commitments and service delivery planning. The purpose of 'Service Delivery' is to execute the tailored process and thus deliver the the service to the customer. This is the counterpart of the S-CMM key process area 'Software Product Engineering'.

Because a level three organization uses standard processes, it is possible and necessary to train employee's so that they can perform their roles. The key process area 'Training Program' is aimed at this. This kpa is similar to the one in the Software CMM, although we probably have to place more emphasis on service attitude than the Software CMM does.

At the third level, the organization is also doing organization wide 'Resource Management'. This kpa is aimed at maintaining control of the resources, hardware, software, and human, needed to deliver the services. Before commitments are made to customers, resources are checked. This key process area also assigns responsibility for monitoring resources and trends.

The key process are 'Problem Management' implements the organization wide investigation of incidents that occur during service delivery. Practices like root-cause analysis are used to determine underlying incidents. Problems are solved by changing either the infrastructure (via 'Configuation Management') or the processes (via 'Organization Process Definition'). 'Problem Management' vaguely plays a similar role as 'Peer Reviews' in the Software CMM.

'Intergroup Coordination' is similar to the Software CMM counterpart. Its aim is the facilitate the communication between the different groups involved in delivering the services to the customer.

Figure 1 shows an (incomplete) overview of the level two and three key process areas.

## References


[1] Kwintes Project website, August 2000. http://www.kwintes.nl.

[2] Frank Niessink and Hans van Vliet. The IT Service Capability Maturity Model. Technical Report IR-463, Division of Mathematics and Computer Science, faculty of Sciences, Vrije Universiteit Amsterdam, 1999. Model version L2-1.0.

[3] *The Capability Maturity Model: Guidelines for Improving the Software Process*. SEI Series in Software Engineering. Addison-Wesley Publishing Company, 1995. Carnegie Mellon University/Software Engineering Institute.

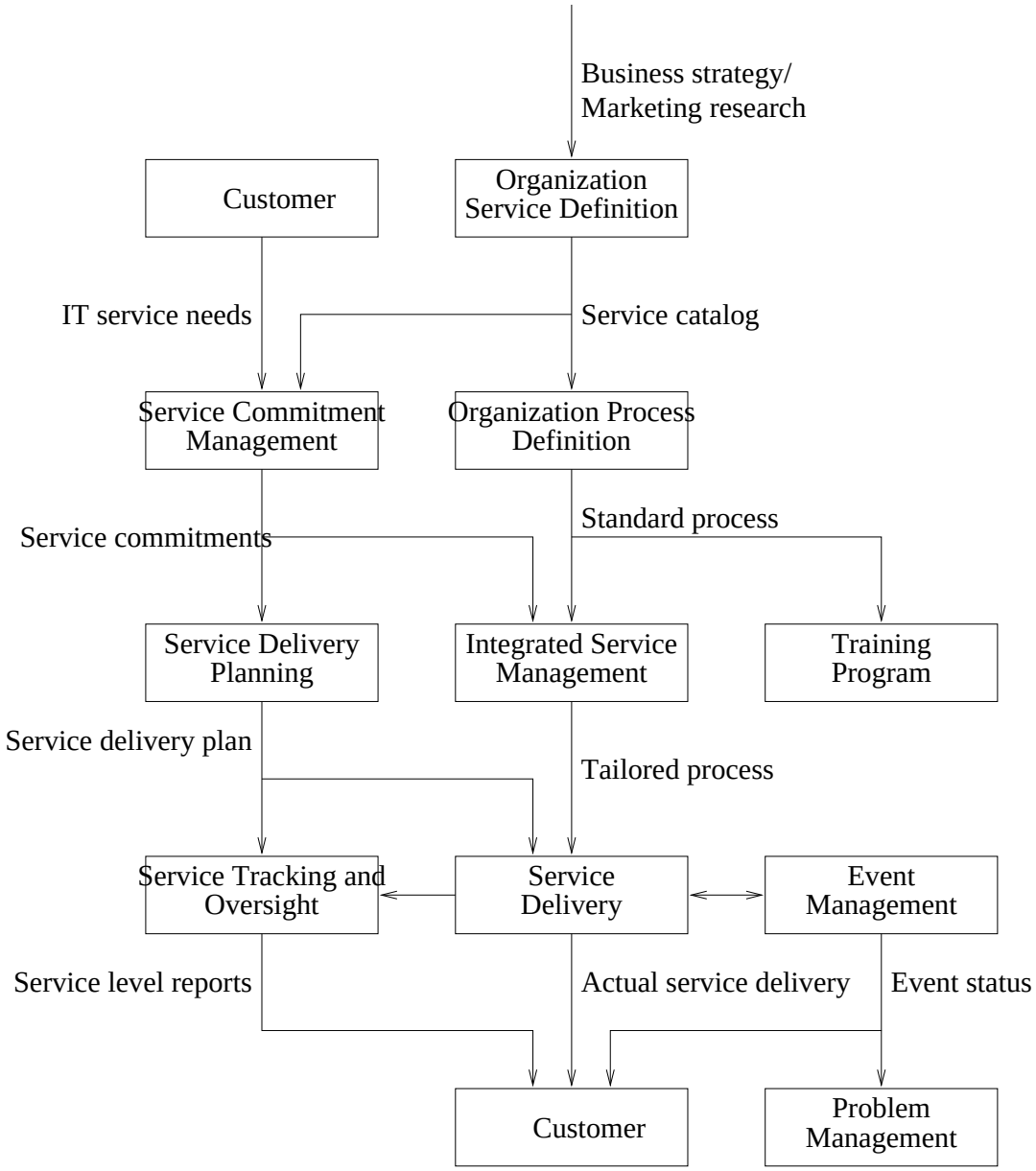


Figure 1: Overview of level two and three