

CMMi and Application Outsourcing

Abstract

A lot of applications outsourcing providers in the market today are claiming for being assessed in different maturity levels of CMMi. But it is important to understand the whole concept of CMMi and its real life application for the buyer before getting lured with this tempting word called “CMMi”.

Apart from understanding what the CMMi model is, its benefits it is also important to know whether the outsourcing provider has actually applied the model

for its process maturity and reaping benefits out of it. It is equally important to know who performed the assessment. The CMMi model i.e. the Capability Maturity Model is developed by the Software Engineering Institute (SEI) at the Carnegie Mellon University. It is helpful for the organizations for improving their processes and give quality output. This paper explains in brief the CMMi model, its various levels, benefits and the ways to evaluate the CMMi appraised outsourcing providers.

Introduction

In order to understand a way to evaluate the outsourcing providers who claim being CMMi appraised, it is important to know the acronym called CMMi and its various levels. It is also important to know why it is important and fruitful

to be assessed at a higher maturity level of CMMi. This paper will walk through the basics of CMMi, its benefits, components and the advantages of being assessed as CMMi level 5.

CMMi Models

Disciplines

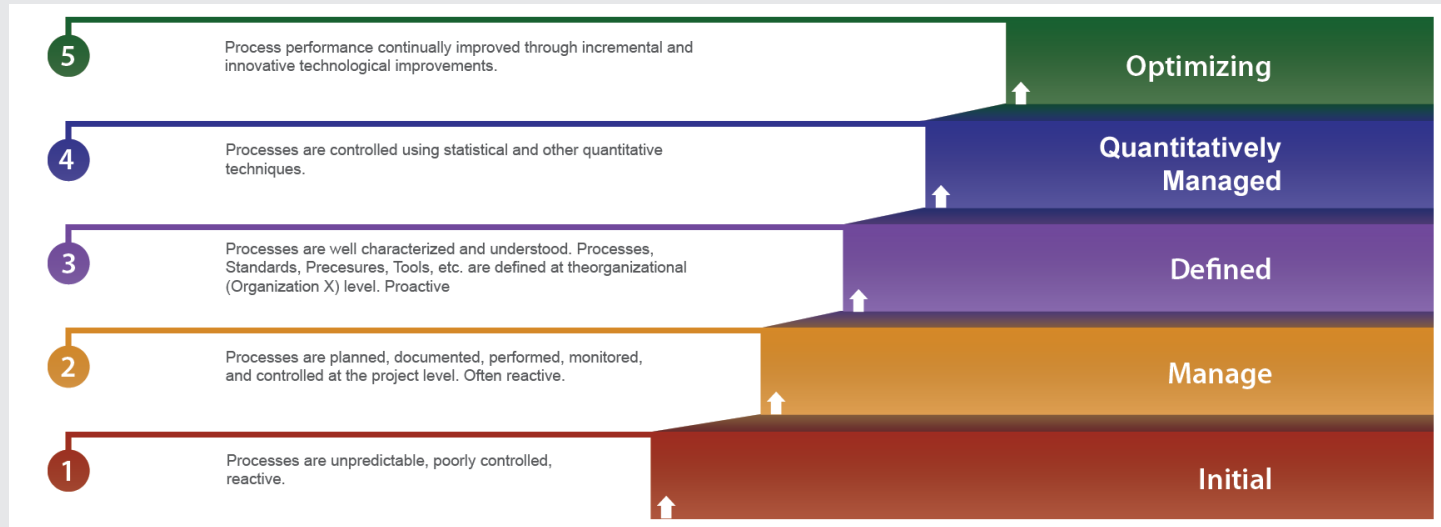
- Systems Engineering SE
- Software Engineering SW
- Integrated Product and Process Development (IPPD)
- Supplier Sourcing (SS)

Representations

- Staged
- Continuous

CMMi structure

CMMi, staged, uses 5 levels to describe the maturity of the organization.



Level 1- Initial

Processes are unpredictable, poorly controlled and reactive. The process performance may not be stable and

may not meet specific objectives such as quality, cost, and schedule, but useful work can be done.

Level 2- Managed

The managed process comes closer to achieving the specific objectives such as quality, cost, and schedule.

A managed process is a performed process that is also:

- Planned and executed in accordance with policy
- Employs skilled people

- Adequate resources are available
- Controlled outputs are produced
- Stakeholders are involved
- The process is reviewed and evaluated for adherence to requirements

Level 3- Defined

Processes, standards, procedures, tools, etc. are defined at the organizational level. Project or local tailoring is allowed, however it must be based on the organization's

set of standard processes and defined per the organization's tailoring guidelines. Major portions of the organization cannot "opt out."

Level 4- Quantitatively Managed

At this level although the processes may produce predictable results, the results may be insufficient to achieve

the established objectives

Level 5- Optimizing

- Maturity level 5 focuses continually on improving process performance through incremental and innovative process and technological improvements.
- An organization continually improves its processes based on the quantitative understanding of the common causes of variation inherent in the processes.
- The effects of deployed process improvements are measured and evaluated against the quantitative process improvement objectives.
- At maturity level 5 the organization is concerned with addressing common causes of process variation and changing the process to improve process performance and to achieve the established quantitative process improvement objectives.

Behaviors at Five Levels

Maturity Level	Process Characteristics	Behaviours
Optimizing	Focus is on Continuous quantitative improvements	Focus on "fire prevention"; improvement anticipated and desired, and impacts assessed.
Quantitatively Managed	Process is measured and controlled	Greater sense of teamwork and inter-dependencies
Defined	Process is characterized for the organization and is proactive	Reliance on defined process. People understand, support and follow the process.
Managed	Process is characterized for projects and is often reactive	Over reliance on experience of good people - when they go, the process goes. " Heroics."
Initial	Process is unpredictable, poorly controlled, and reactive	Focus on " fire fighting" effectiveness low - frustration high.

CMMi Components

- Within each of the 5 Maturity Levels, there are basic functions that need to be performed – these are called Process Areas (PAs).
- For Maturity Level 2 there are 7 Process Areas that must be completely satisfied.
- For Maturity Level 3 there are 11 Process Areas that must be completely satisfied.
- Given the interactions and overlap, it becomes more efficient to work the Maturity Level 2 and 3 issues concurrently.
- Within each PA there are Goals to be achieved and within each Goal there are Practices, work products, etc. to be followed that will support each of the Goals.

Benefits from the Maturity Model

As per the present day data, more than 80 companies across the world have been assessed at CMMi level 5 by SEI. Growing from the initial level to the higher maturity level takes a lot of time, effort and challenges to be faced by the management. The initial efforts are to be put during the initial levels. However, it cannot be said that for attaining the higher levels there is no significant efforts needed as the base is already built up. Attaining the higher maturity levels of the CMMi requires equal amount of hard work to be put forth. The major challenges faced can be:

- To understand the present situation and the state of the organization.
- Analyze the gaps that need to be filled up for process improvement.
- Plans to overcome the resistance due the changes in the current processes.
- The top management support.

The above challenges can be faced effectively by outsourcing and adapting to the CMMi models and its approaches. Outsourcing helps to an organization to get the benefits of the matured processes in a short span of time. Here in Silver Touch, we have been able take a leap from CMMi level 3 to CMMi level 5 in a span of 3 years. By implementing the practices of the higher maturity levels in to our current structure we as well as our outsourcing clients have been able to reap benefits. Some of the benefits from CMMi have been summed up below:

- Improved schedule and budget predictability
- Improved cycle time
- Increased productivity
- Improved quality (as measured by defects)
- Increased customer satisfaction
- Improved employee morale
- Increased return on investment
- Decreased cost of quality

The Outsourcer's rating claim

Nowadays the organizations are using the CMMi assessment and ratings as a strong marketing weapon for pitching to the clients and trying to increase their sales. However, it should be understood that the CMMi model is not a tool to validate the CMMi assessment rating claims. The verifications should be made to see that the CMMi assessment is covering not only the internal operations and processes but also the offshore development techniques. The client satisfaction is another aspect that should be covered under this. In Silver Touch the client satisfaction index is considered as the most important metric for the projects that were considered under assessment. The second factor to consider is the selection of the

data. The data should be varied and should cover all the relevant details. During the assessment in Silver Touch the selection of the projects were based on the varied technologies and duration. There were around 5 projects taken for assessment. This helps in sampling of the different data sources and helps in giving a correct judgment. The lack of sufficient or correct data/ sampling would result into inaccurate results.

The data chosen for the assessment is supposed to be the latest one i.e. in the past 1-2 years. In Silver Touch the current data of just the past year's operations were considered.

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It is also important to see not just the organization under assessment but the one who is conducting the assessment. The assessment can be done by the organization by itself or by some SEI authorized third party organizations for its assessments. The assessment for CMMi level

5 in Silver Touch was done by DQS India. DQS India is a Delhi based company which is an Authorized Transition Partner with SEI (Software Engineering Institute) to provide CMMi Assessment and training services.

Customer Benefit

At Silver Touch various activities are going on at the organization level which is undertaken by various software engineering process groups working together. These groups work are working on:

- Process improvement
- Technology improvement
- Base lining the metrics which quantifies the work outputs
- Finding root causes of the issues prevailing in the organization and implementing the solutions for the same

- Review at the project level for the various artifacts and avoid deviation in the software development life cycle

Our customers benefit from our process areas as a result of on time and error free deliverables. They take the advantage from the entire framework when working together for long term projects.

Conclusion

Hence there is always a need to check the commitments made by the outsourcer's or outsourcing providers on the basis of the CMMi assessments as there is no room for mere face value of the CMMi ratings but the benefits that can be obtained by its practices and applications.

Deliver best products, software solutions and services, on time with quality, and as per customer expectations

About SilverTouch

SilverTouch, a company established in 1992 is widely accepted for its IT solutions with a huge customer base in more than 20 countries across the world.

SilverTouch is actively engaged in Enterprise software development, enterprise content management, document management and IT consulting services such as Business process optimization, process consulting, implementation and customization of ERP. SilverTouch leads brilliantly in new technical developments such as: Mobile Application development services on iPhone, iPad, Blackberry, Android, J2ME and Windows mobile platforms. Even now, SilverTouch helps its global clients for major developments, deployments and managements of their mobility solutions and enterprise application development programs.

SilverTouch has alliance with several industry leaders such as Microsoft, Apple, Cisco, IBM, Oracle, SAP, Java, Dell, VM ware, Symantec, Sonic Wall which provides a competitive edge over other industry peers and targets to understand and cater to all types of requirements that concern our clients, thereby, leading to serve them precisely to their satisfaction.

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