

CMMI[®] Overview

What is the CMMI[®]?

The CMMI[®] (Capability Maturity Model Integrated) is a repeatable capability assessment method produced by Software Engineering Institute for the US Department of Defence.

The CMMI[®] (the evolution of the Capability Maturity Model, or CMM) was originally created to enable the US DOD to assess the capability of supplier software organisations. It's use has since spread to be used by organisations who just wish to be better, more consistent and therefore gain the edge on the competition.

The CMMI[®] is not just an assessment method it is a capability map, describing the specific goals and practices that an organisation requires to reach a level of capability and maturity.

The CMMI[®] has two representations that are essentially two different views of the same process areas.

The Staged Representation

The staged representation organises process areas into maturity levels. Each maturity level provides a grouping of process areas that have to be achieved in order to achieve that level of maturity.

MATURITY LEVEL	PROCESS AREAS						
5 - OPTIMISING	Organisational Innovation & Deployment	Casual Analysis & Resolution					
4 - QUANTITATIVELY MANAGED	Organisational Process Performance	Quantitative Project Management					
3 - DEFINED	Organisational Process Focus	Organisational Process Definition	Organisational Training	Organisational Environment For Integration	Integrated Teaming	Decision Analysis & Resolution	Integrated Supplier Management
	Technical Solution	Requirements Development	Project Integration	Validation	Verification	Risk Management	Integrated Project Management
2 - MANAGED	Requirements Management	Project Planning	Project Monitoring & Control	Supplier Agreement Management	Measurement & Analysis	Process & Product Quality Assurance	Configuration Management

The Maturity Levels are:

MATURITY LEVEL	FOCUS	DESCRIPTION
5. OPTIMISING	Continuous Process Improvement	Processes are proactively improved in line with process performance measures
4. QUANTITATIVELY MANAGED	Organisation	Process performance is measured and used to improve the process
3. DEFINED	Process Metrics	Performing the process to an Organisational Standard
2. MANAGED	Organisation	Performing processes in a managed way at a local level
1. INITIAL	Project	Adhoc application of processes
	Nothing	

The logic of the staged approach is that the process areas of a lower maturity level must be fully achieved before a higher level can be achieved (thereby forming a maturity foundation).

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The Continuous Representation

In the continuous model, each process area is profiled individually by capability. With this representation an organisation can have a capability profile that shows each of the process areas at different levels of capability.

CATEGORY	PROCESS AREAS							
PROJECT MANAGEMENT	Project Planning	Project Monitoring & Control	Supplier Agreement Management	Risk Management	Integrated Teaming	Integrated Project Management	Quantitative Project Management	Integrated Supplier Management
ENGINEERING	Requirements Management	Requirements Development	Technical Solution	Validation	Verification	Product Integration		
SUPPORT	Configuration Management	Measurement & Analysis	Process & Product Quality Assurance	Decision Analysis & Resolution	Casual Analysis & Resolution	Organisational Environment For Integration		
PROCESS MANAGEMENT	Organisational Process Focus	Organisational Process Definition	Organisational Training	Organisational Innovation & Deployment	Organisational Process Performance			

The Capability Levels are:

CAPABILITY LEVEL	DESCRIPTION
5. OPTIMISING	Processes are proactively improved in line with process performance measures
4. QUANTITATIVELY MANAGED	Process performance is measured and used to improve the process
3. DEFINED	Performing the process to an Organisational Standard
2. MANAGED	Performing processes in a managed way at a local level
1. PERFORMED	Applying basic practices implemented by the process area
0. INCOMPLETE	Incomplete implementation of the process area

The logic behind the continuous model is that process areas considered important to an organisation can be improved in isolation from other process areas – although in practice this is rarely the case.

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