



**CMMI® for Services V2.0
Practices for Maturity Levels 2+3**

CMMI V2.0 Source

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Revision History

Version #	Date	Author	Changes Made
1	1/2/20	Neil	Copy of practices from CMMI V2.0 SVC

Level	✓ ← PA also exists at higher level	Practice Areas	Performance Capability
5 Optimizing		CAR, MPM (level 5 practices)	
4 Quantitatively Managed		CAR, PCM, SAM, MPM, PLAN, GOV (level 4 practices)	
3 Defined	✓	Causal Analysis and Resolution (CAR) Decision Analysis and Resolution (DAR) Risk and Opportunity Management (RSK) Peer Reviews (PR) Verification and Validation (VV) Continuity (CONT) Incident Resolution and Prevention (IRP) Strategic Service Management (STSM) Organizational Training (OT) Process Management (PCM) Process Asset Development (PAD)	
2 Managed	✓	Service Delivery Management (SDM)	
	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	Supplier Agreement Management (SAM) Managing Performance and Measurement (MPM) Process Quality Assurance (PQA) Configuration Management (CM) Monitor and Control (MC) Planning (PLAN) Estimation (EST) Requirements Development & Management (RDM) Governance (GOV) Implementation Infrastructure (II)	
1 Initial / 0 Incomplete			Risk Rework

CMMI Services V2.0

CMMI V2.0 Services Summary

Practice Area	Capability Level 1	Capability Level 2	Capability Level 3	Capability Level 4	Capability Level 5
Causal Analysis and Resolution (CAR)					
Decision Analysis and Resolution (DAR)					
Risk and Opportunity Management (RSK)					
Organizational Training (OT)					
Process Management (PCM)					
Process Asset Development (PAD)					
Peer Reviews (PR)					
Verification and Validation (VV)					
Continuity (CONT)					
Strategic Service Management (STSM)					
Incident Resolution and Prevention (IRP)					
Service Delivery Management (SDM)					
Supplier Agreement Management (SAM)					
Managing Performance & Measurement (MPM)					
Process Quality Assurance (PQA)					
Configuration Management (CM)					
Monitor and Control (MC)					
Planning (PLAN)					
Estimating (EST)					
Requirements Development & Management (RDM)					
Governance (GOV)					
Implementation Infrastructure (II)					

- Maturity Level 2 = Green colored Practice Areas, each implemented with Level 1 and Level 2 practices.
- Maturity Level 3 = Maturity Level 2 + **blue Practice Areas** implemented with Level 1, Level 2, and Level 3 practices.
- Maturity Level 4 = Maturity Level 3 + **dark brown** CAR, PCM, SAM, MPM, PLAN, and GOV Level 4 practices.
- Maturity Level 5 = Maturity Level 4 + **light brown** CAR, and MPM Level 5 practices.
- Supplier Agreement Management (SAM) can be declared Not Applicable if there are no suppliers (same as CMMI V1.3).

Practices for Maturity Levels 2+3

Causal Analysis and Resolution (CAR)

CAR 2.1	Select outcomes for analysis.
CAR 2.2	Analyze and address causes of outcomes.
CAR 3.1	Determine root causes of selected outcomes by following an organizational process.
CAR 3.2	Propose actions to address identified root causes.
CAR 3.3	Implement selected action proposals.
CAR 3.4	Record root cause analysis and resolution data.
CAR 3.5	Submit improvement proposals for changes proven to be effective.

Configuration Management (CM)

CM 2.1	Identify items to be placed under configuration management.
CM 2.2	Develop, keep updated, and use a configuration and change management system.
CM 2.3	Develop or release baselines for internal use or for delivery to the customer.
CM 2.4	Manage changes to the items under configuration management.
CM 2.5	Develop, keep updated, and use records describing items under configuration management.
CM 2.6	Perform configuration audits to maintain the integrity of configuration baselines, changes, and content of the configuration management system.

Continuity (CONT)

CONT 2.1	Identify and prioritize functions essential for continuity.
CONT 2.2	Identify and prioritize resources essential for continuity.
CONT 2.3	Develop, keep updated, and follow continuity plans to resume performing essential functions.
CONT 3.1	Develop and keep updated materials for continuity training.
CONT 3.2	Provide and evaluate continuity training according to the plan.
CONT 3.3	Prepare, conduct, and analyze results from verification and validation of the continuity plan.

Decision Analysis and Resolution (DAR)

DAR 2.1	Develop, keep updated, and use rules to determine when to follow a recorded process for criteria-based decisions.
DAR 2.2	Develop criteria for evaluating alternatives.
DAR 2.3	Identify alternative solutions.

DAR 2.4	Select evaluation methods.
DAR 2.5	Evaluate and select solutions using criteria and methods.
DAR 3.1	Develop, keep updated, and use a description of role-based decision authority.

Estimating (EST)

EST 2.1	Develop, keep updated, and use the scope of what is being estimated.
EST 2.2	Develop and keep updated estimates for the size of the solution.
EST 2.3	Based on size estimates, develop and record effort, duration, and cost estimates and their rationale for the solution.
EST 3.1	Develop and keep updated a recorded estimation method.
EST 3.2	Use the organizational measurement repository and process assets for estimating work.

Governance (GOV)

GOV 2.1	Senior management defines, keeps updated, and communicates organizational directives for process implementation and improvement based on organization needs and objectives.
GOV 2.2	Senior management ensures resources and training are provided for developing, supporting, performing, improving, and evaluating adherence to expected processes.
GOV 2.3	Senior management identifies their information needs and uses the collected information to provide governance and oversight of effective process implementation and improvement.
GOV 2.4	Senior management holds people accountable for adhering to organization directives and achieving process implementation and improvement objectives.
GOV 3.1	Senior management ensures that measures supporting objectives throughout the organization are collected, analyzed, and used.
GOV 3.2	Senior management ensures that competencies and processes are aligned with the objectives of the organization.

Implementation Infrastructure (II)

II 2.1	Provide sufficient resources, funding, and training for developing and performing processes.
II 2.2	Develop and keep processes updated, and verify they are being followed.
II 3.1	Use organizational processes and process assets to plan, manage, and perform the work.
II 3.2	Evaluate the adherence to and effectiveness of the organizational processes.
II 3.3	Contribute process-related information or process assets to the organization.

Incident Resolution and Prevention (IRP)

IRP 2.1	Develop, keep updated, and follow an approach for incident resolution and prevention.
IRP 2.2	Monitor and resolve each incident to closure.
IRP 2.3	Communicate incident status.
IRP 3.1	Develop, keep updated, and use an incident management system for processing and tracking incidents and their resolution.
IRP 3.2	Analyze selected incident and resolution data for prevention of future incidents.

Managing Performance and Measurement (MPM)

MPM 2.1	Derive and record measurement and performance objectives from selected business needs and objectives and keep them updated.
MPM 2.2	Develop, keep updated, and use operational definitions for measures.
MPM 2.3	Obtain specified measurement data according to the operational definitions.
MPM 2.4	Analyze performance and measurement data according to the operational definitions.
MPM 2.5	Store measurement data, measurement specifications, and analysis results according to the operational definitions.
MPM 2.6	Take actions to address identified issues with meeting measurement and performance objectives.
MPM 3.1	Develop, keep updated, and use organizational measurement and performance objectives traceable to business objectives.
MPM 3.2	Follow organizational processes and standards to develop and use operational definitions for measures and keep them updated.
MPM 3.3	Develop, keep updated, and follow a data quality process.
MPM 3.4	Develop, keep updated, and use the organization's measurement repository.
MPM 3.5	Analyze organizational performance using measurement and performance data to determine performance improvement needs.
MPM 3.6	Periodically communicate performance results to the organization.

Monitor and Control (MC)

MC 2.1	Track actual results against estimates for size, effort, schedule, resources, knowledge and skills, and budget.
MC 2.2	Track the involvement of identified stakeholders and commitments.
MC 2.3	Monitor the transition to operations and support.

MC 2.4	Take corrective actions when actual results differ significantly from planned results and manage to closure.
MC 3.1	Manage the project using the project plan and the project process.
MC 3.2	Manage critical dependencies and activities.
MC 3.3	Monitor the work environment to identify issues.
MC 3.4	Manage and resolve issues with affected stakeholders.

Organizational Training (OT)

OT 2.1	Identify training needs.
OT 2.2	Train personnel and keep records.
OT 3.1	Develop and keep updated the organization's strategic and short-term training needs.
OT 3.2	Coordinate training needs and delivery between the projects and the organization.
OT 3.3	Develop, keep updated, and follow organizational strategic and short-term training plans.
OT 3.4	Develop, keep updated, and use a training capability to address organizational training needs.
OT 3.5	Assess the effectiveness of the organization's training program.
OT 3.6	Record, keep updated, and use the set of organizational training records.

Peer Reviews (PR)

PR 2.1	Develop and keep updated procedures and supporting materials used to prepare for and perform peer reviews.
PR 2.2	Select work products to be peer reviewed.
PR 2.3	Prepare and perform peer reviews on selected work products using established procedures.
PR 2.4	Resolve issues identified in peer reviews.
PR 3.1	Analyze results and data from peer reviews.

Planning (PLAN)

PLAN 2.1	Develop and keep updated the approach for accomplishing the work.
PLAN 2.2	Plan for the knowledge and skills needed to perform the work.
PLAN 2.3	Based on recorded estimates, develop and keep the budget and schedule updated.
PLAN 2.4	Plan the involvement of identified stakeholders.
PLAN 2.5	Plan transition to operations and support.
PLAN 2.6	Ensure plans are feasible by reconciling available and estimated resources.
PLAN 2.7	Develop the project plan, ensure consistency among its elements, and keep it updated.
PLAN 2.8	Review plans and obtain commitments from affected stakeholders.

PLAN 3.1	Use the organization's set of standard processes and tailoring guidelines to develop, keep updated, and follow the project process.
PLAN 3.2	Develop a plan and keep it updated, using the project process, the organization's process assets, and the measurement repository.
PLAN 3.3	Identify and negotiate critical dependencies.
PLAN 3.4	Plan for the project environment and keep it updated based on the organization's standards.

Process Asset Development (PAD)

PAD 2.1	Determine what process assets will be needed to perform the work.
PAD 2.2	Develop, buy, or reuse process assets.
PAD 2.3	Make processes and assets available.
PAD 3.1	Develop, keep updated, and follow a strategy for building and updating process assets.
PAD 3.2	Develop, record, and keep updated a process architecture that describes the structure of the organization's processes and process assets.
PAD 3.3	Develop, keep updated, and make processes and assets available for use.
PAD 3.4	Develop, keep updated, and use tailoring criteria and guidelines for the set of standard processes and assets.
PAD 3.5	Develop, keep updated, and make the organization's process asset library available for use.
PAD 3.6	Develop, keep updated, and make work environment standards available for use.
PAD 3.7	Develop, keep updated, and make organizational measurement and analysis standards available for use.

Process Change Management (PCM)

PCM 2.1	Identify improvements to the processes and process assets.
PCM 2.2	Develop, keep updated, and follow plans for implementing selected process improvements.
PCM 3.1	Develop, keep updated, and use process improvement objectives traceable to the business objectives.
PCM 3.2	Identify processes that are the largest contributors to meeting business objectives.
PCM 3.3	Explore and evaluate potential new processes, techniques, methods, and tools to identify improvement opportunities.
PCM 3.4	Provide support for implementing, deploying, and sustaining process improvements.
PCM 3.5	Deploy organizational standard processes and process assets.
PCM 3.6	Evaluate the effectiveness of deployed improvements in achieving process improvement objectives.

Process Quality Assurance (PQA)

PQA 2.1	Develop, keep updated, and follow a quality assurance approach and plan based on historical quality data.
PQA 2.2	Throughout the project, objectively evaluate selected performed processes and work products against the recorded process and applicable standards.
PQA 2.3	Communicate quality and non-compliance issues and ensure their resolution.
PQA 2.4	Record and use results of quality assurance activities.
PQA 3.1	Identify and record opportunities for improvement during quality assurance activities.

Requirements Development and Management (RDM)

RDM 2.1	Elicit stakeholder needs, expectations, constraints, and interfaces or connections.
RDM 2.2	Transform stakeholder needs, expectations, constraints, and interfaces or connections into prioritized customer requirements.
RDM 2.3	Develop an understanding with the requirements providers on the meaning of the requirements.
RDM 2.4	Obtain commitment from project participants that they can implement the requirements.
RDM 2.5	Develop, record, and maintain bidirectional traceability among requirements and activities or work products.
RDM 2.6	Ensure that plans and activities or work products remain consistent with requirements.
RDM 3.1	Develop and keep requirements updated for the solution and its components.
RDM 3.2	Develop operational concepts and scenarios.
RDM 3.3	Allocate the requirements to be implemented.
RDM 3.4	Identify, develop, and keep updated interface or connection requirements.
RDM 3.5	Ensure that requirements are necessary and sufficient.
RDM 3.6	Balance stakeholder needs and constraints.
RDM 3.7	Validate requirements to ensure the resulting solution will perform as intended in the target environment.

Risk and Opportunity Management (RSK)

RSK 2.1	Analyze identified risks or opportunities.
RSK 2.2	Monitor identified risks or opportunities and communicate status to affected stakeholders.
RSK 3.1	Identify and use risk or opportunity categories.
RSK 3.2	Define and use parameters for risk or opportunity analysis and handling.
RSK 3.3	Develop and keep updated a risk or opportunity management strategy.

RSK 3.4	Develop and keep updated risk or opportunity management plans.
RSK 3.5	Manage risks or opportunities by implementing planned risk or opportunity management activities.

Service Delivery Management (SDM)

SDM 2.1	Develop, record, keep updated, and follow service agreements.
SDM 2.2	Receive and process service requests in accordance with service agreements.
SDM 2.3	Deliver services in accordance with service agreements.
SDM 2.4	Analyze existing service agreements and service data to prepare for updated or new agreements.
SDM 2.5	Develop, record, keep updated, and follow the approach for operating and changing the service system.
SDM 2.6	Confirm the readiness of the service system to support the delivery of services.
SDM 3.1	Develop, record, keep updated, and use organizational standard service systems and agreements.

Strategic Service Management (STSM)

STSM 2.1	Develop, keep updated, and use descriptions of current services.
STSM 2.2	Collect, record, and analyze data about strategic needs and capabilities for service delivery.
STSM 2.3	Develop, keep updated, and follow an approach for providing new or changed services derived from strategic needs and capabilities.
STSM 3.1	Develop, keep updated, and use the set of organizational standard services and service levels.

Supplier Agreement Management (SAM) (N/A if no suppliers)

SAM 2.1	Monitor supplier as specified in the supplier agreement and keep agreement updated.
SAM 2.2	Perform activities as specified in the supplier agreement.
SAM 2.3	Verify that the supplier agreement is satisfied before accepting the acquired supplier deliverable.
SAM 2.4	Manage invoices submitted by the supplier according to the supplier agreements.
SAM 3.1	Select technical supplier deliverables for analysis and conduct technical reviews.
SAM 3.2	Select and monitor supplier processes and deliverables based on criteria in the supplier agreement.

Verification and Validation (VV)

VV 2.1	Select components and methods for verification and validation.
VV 2.2	Develop, keep updated, and use the environment needed to support verification and validation.
VV 2.3	Develop, keep updated, and follow procedures for verification and validation.
VV 3.1	Develop, keep updated, and use criteria for verification and validation.
VV 3.2	Analyze and communicate verification and validation results.