CAPABILITY MATURITY MODEL INTEGRATION (CMMI) FOR DEVELOPMENT, VERSION 1.3





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PROJECT MANAGEMENT

Requirements Management (REQM)

The purpose of Requirements Management is to manage requirements of the project's products and product components and to ensure alignment between those requirements and the project's

- SG 1 Manage Requirements
- SP 1.1 Understand Requirements
- SP 1.2 Obtain Commitment to Requirements
- SP 1.3 Manage Requirements Changes
- SP 1.4 Maintain Bidirectional Traceability of Requirements

Supplier Agreement Management (SAM)

The purpose of Supplier Agreement Management is to manage the acquisition of products and

- Agreements with the suppliers are established and maintained.
- Determine the type of acquisition for each product or product component to be acquired. SP 1.2 Select Suppliers
- and established criteria. SP 1.3 Establish Supplier Agreements Establish and maintain supplier agreements.
- Perform activities with the supplier as specified in the supplier agreement. SP 2.2 Accept the Acquired Product
- Ensure Transition of Products Ensure the transition of products acquired from the supplier.

Integrated Project Management (IPM)

The purpose of Integrated Project Management is to establish and manage the project and the involvement of relevant stakeholders according to an integrated and defined process that is tailored from the organization's set of standard processes.

- The project is conducted using a defined process tailored from the organization's set of
- SP 1.1 Establish the Project's Defined Process Establish and maintain the project's defined process from project startup through the life
- SP 1.2 Use Organizational Process Assets for Planning Project Activities Use organizational process assets and the measurement repository for estimating and
- SP 1.3 Establish the Project's Work Environment Establish and maintain the project's work environment based on the organization's work environment standards.
- SP 1.4 Integrate Plans Integrate the project plan and other plans that affect the project to describe the project's
- SP 1.5 Manage the Project Using Integrated Plans Manage the project using the project plan, other plans that affect the project, and the
- Contribute process related experiences to organizational process assets.
- Coordinate and Collaborate with Relevant Stakeholders Coordination and collaboration between the project and relevant stakeholders are
- SP 2.1 Manage Stakeholder Involvement Manage the involvement of relevant stakeholders in the project.
- Participate with relevant stakeholders to identify, negotiate, and track critical
- SP 2.3 Resolve Coordination Issues

Resolve issues with relevant stakeholders.

Project Planning (PP)

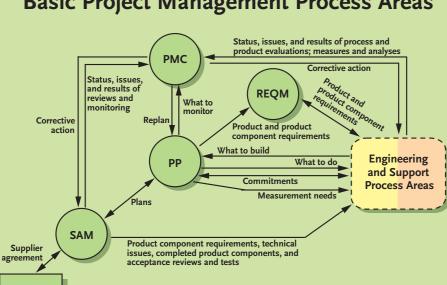
The purpose of Project Planning is to establish and maintain plans that define project activities.

- SP 1.1 Estimate the Scope of the Project Requirements are managed and inconsistencies with project plans and work products are Establish a top-level work breakdown structure (WBS) to estimate the scope of the
- SP 1.2 Establish Estimates of Work Product and Task Attributes Develop an understanding with the requirements providers on the meaning of the Establish and maintain estimates of work product and tasks attributes.
- Define project lifecycle phases on which to scope the planning effort. Estimate the project's effort and cost for work products and tasks based on estimation
- Manage changes to requirements as they evolve during the project.
- Maintain bidirectional traceability among requirements and work products.
- A project plan is established and maintained as the basis for managing the project. Ensure that project plans and work products remain aligned with requirements.
- - Establish and maintain the project's budget and schedule. SP 2.2 Identify Project Risks Identify and analyze project risks.

SG 2 Develop a Project Plan

- SP 2.3 Plan Data Management Plan for the management of project data. SP 2.4 Plan the Project's Resources
- Plan for resources to perform the project
- SP 2.5 Plan Needed Knowledge and Skills Plan for knowledge and skills needed to perform the project.
- Plan the involvement of identified stakeholders SP 2.7 Establish the Project Plan Establish and maintain the overall project plan.
- SG 3 Obtain Commitment to the Plan Commitments to the project plan are established and maintained. Review Plans That Affect the Project Review all plans that affect the project to understand project commitments
- Reconcile Work and Resource Levels Adjust the project plan to reconcile available and estimated resources. Obtain commitment from relevant stakeholders responsible for performing and

Basic Project Management Process Areas



Risk Management (RSKM)

The purpose of Risk Management is to identify potential problems before they occur so that riskhandling activities can be planned and invoked as needed across the life of the product or project to

- mitigate adverse impacts on achieving objectives.
- Prepare for Risk Management Preparation for risk management is conducted. SP 1.1 Determine Risk Sources and Categories

Determine risk sources and categories.

- SP 1.2 Define Risk Parameters Define parameters used to analyze and categorize risks and to control the risk management effort.
- SP 1.3 Establish a Risk Management Strategy Establish and maintain the strategy to be used for risk management.
- Risks are identified and analyzed to determine their relative importance. SP 2.1 Identify Risks Identify and document risks
- SP 2.2 Evaluate, Categorize, and Prioritize Risks Evaluate and categorize each identified risk using defined risk categories and parameters,
- and determine its relative priority.
- Risks are handled and mitigated as appropriate to reduce adverse impacts on achieving SP 3.1 Develop Risk Mitigation Plans
- Develop a risk mitigation plan in accordance with the risk management strategy. SP 3.2 Implement Risk Mitigation Plans Monitor the status of each risk periodically and implement the risk mitigation plan as appropriate.

SUPPORT

Process and Product Quality Assurance (PPQA)

The purpose of Process and Product Quality Assurance is to provide staff and management with

Objectively evaluate selected performed processes against applicable process

Objectively evaluate selected work products against applicable process descriptions,

Noncompliance issues are objectively tracked and communicated, and resolution is

Advanced Support Process Areas

All Process Areas

Communicate quality issues and ensure the resolution of noncompliance issues with the

descriptions, standards, and procedures is objectively evaluated.

Establish and maintain records of quality assurance activities.

Adherence of the performed process and associated work products to applicable process

objective insight into processes and associated work products.

SG 1 Objectively Evaluate Processes and Work Products

descriptions, standards, and procedures

SP 2.1 Communicate and Resolve Noncompliance Issues

SP 1.1 Objectively Evaluate Processes

SG 2 Provide Objective Insight

SP 2.2 Establish Records

SP 1.2 Objectively Evaluate Work Products

standards, and procedures.

Project Monitoring and Control (PMC)

The purpose of Project Monitoring and Control is to provide an understanding of the project's progress so that appropriate corrective actions can be taken when the project's performance

- deviates significantly from the plan.
- Monitor the Project Against the Plan Actual project progress and performance are monitored against the project plan.
- Monitor actual values of project planning parameters against the project plan.
- Monitor Commitments Monitor commitments against those identified in the project plan. SP 1.3 Monitor Project Risks
- Monitor risks against those identified in the project plan. Monitor Data Management
- Monitor the management of project data against the project plan. Monitor Stakeholder Involvement Monitor stakeholder involvement against the project plan.
- Conduct Progress Reviews Periodically review the project's progress, performance, and issues. SP 1.7 Conduct Milestone Reviews Review the project's accomplishments and results at selected project milestones.
- Manage Corrective Action to Closure Corrective actions are managed to closure when the project's performance or results deviate significantly from the plan.
- Collect and analyze issues and determine corrective actions to address them. SP 2.2 Take Corrective Action Take corrective action on identified issues SP 2.3 Manage Corrective Actions

Manage corrective actions to closure.

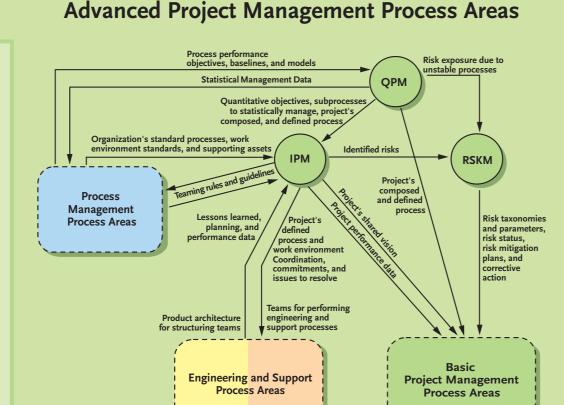
Quantitative Project Management (QPM)

The purpose of Quantitative Project Management is to quantitatively manage the project to achieve the project's established quality and process performance objectives.

- Prepare for Quantitative Management Preparation for quantitative management is conducted. SP 1.1 Establish the Project's Objectives
- Establish and maintain the project's quality and process performance objectives. Using statistical and other quantitative techniques, compose a defined process that
- enables the project to achieve its quality and process performance objectives. Select Subprocesses and Attributes Select subprocesses and attributes critical to evaluating performance and that help to
- achieve the project's quality and process performance objectives. Select Measures and Analytic Techniques Select measures and analytic techniques to be used in quantitative management.
- **Ouantitatively Manage the Project**
- Monitor the Performance of Selected Subprocesses Monitor the performance of selected subprocesses using statistical and other
- Manage Project Performance Manage the project using statistical and other quantitative techniques to determine whether or not the project's objectives for quality and process performance will be Perform Root Cause Analysis

project's quality and process performance objectives.

Perform root cause analysis of selected issues to address deficiencies in achieving the



Configuration Management (CM)

Baselines of identified work products are established.

Establish a Configuration Management System

Track change requests for configuration items.

Establish Configuration Management Records

Integrity of baselines is established and maintained.

Establish and maintain records describing configuration items.

Causal Analysis and Resolution (CAR)

Control changes to configuration items.

Determine Causes of Selected Outcomes

Address Causes of Selected Outcomes

configuration management.

Track and Control Changes

Track Change Requests

SP 2.2 Control Configuration Items

SP 3.2 Perform Configuration Audits

action to improve process performance.

SP 1.2 Analyze Causes

Select Outcomes for Analysis

Select outcomes for analysis.

Implement Action Proposals

Record Causal Analysis Data

and configuration audits.

The purpose of Configuration Management is to establish and maintain the integrity of work

Create or release baselines for internal use and for delivery to the customer.

Changes to the work products under configuration management are tracked and

Perform configuration audits to maintain the integrity of configuration baselines.

The purpose of Causal Analysis and Resolution is to identify causes of selected outcomes and take

Perform causal analysis of selected outcomes and propose actions to address them.

Record causal analysis and resolution data for use across projects and the organization.

Root causes of selected outcomes are systematically determined.

Root causes of selected outcomes are systematically addressed.

Implement selected action proposals developed in causal analysis.

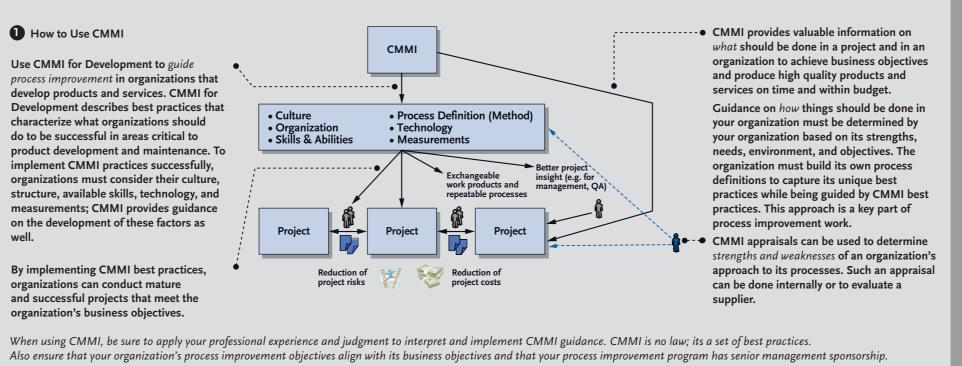
Evaluate the effect of implemented actions on process performance.

products using configuration identification, configuration control, configuration status accounting,

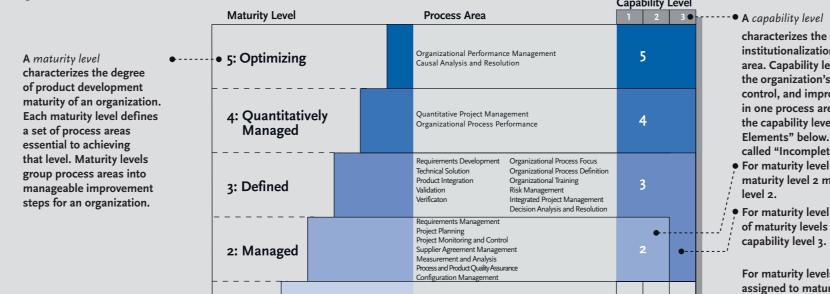
dentify configuration items, components, and related work products to be placed under

Establish and maintain a configuration management and change management system for

HOW TO USE



Also ensure that your organization's process improvement objectives align with its business objectives and that your process improvement program has senior management sponsorship.



the capability levels 1-5 see "Generic Elements" below. Capability Level o, called "Incomplete," is not shown. • For maturity level 2 the process areas of maturity level 2 must achieve capability • For maturity level 3 the process areas of maturity levels 2 and 3 must achieve capability level 3.

characterizes the degree of

institutionalization of a single process

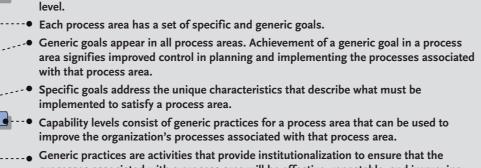
the organization's ability to perform,

control, and improve its performance

in one process area. For a definition of

area. Capability levels focus on growing

For maturity levels 4, all process areas assigned to maturity levels 2, 3, and 4 must achieve capability level 3. For maturity levels 5, all process areas must achieve capability level 3.



• Maturity levels organize the process areas. Each process area belongs to one maturity

processes associated with a process area will be effective, repeatable, and improving. • Specific practices are activities that are considered important in achieving the associated

ENGINEERING

Technical Solution (TS)

- The purpose of Technical Solution is to select, design, and implement solutions to requirements.
- Solutions, designs, and implementations encompass products, product components, and product related lifecycle processes either singly or in combination as appropriate.
- Select Product Component Solutions Product or product component solutions are selected from alternative solutions. Develop Alternative Solutions and Selection Criteria
- Develop alternative solutions and selection criteria. Select Product Component Solutions Select the product component solutions based on selection criteria.
- Product or product component designs are developed
- Design the Product or Product Component Develop a design for the product or product component.
- Establish a Technical Data Package Establish and maintain a technical data package.

Validation (VAL)

intended use when placed in its intended environment

Preparation for validation is conducted.

Prepare for Validation

SP 1.1 Select Products for Validation

SP 2.1 Perform Validation

SP 2.2 Analyze Validation Results

SP 1.2 Establish the Validation Environment

SP 1.3 Establish Validation Procedures and Criteria

Validate Product or Product Components

their intended operating environment.

Analyze results of validation activities

Establish and maintain procedures and criteria for validation.

Perform validation on selected products and product components.

- Design Interfaces Using Criteria Design product component interfaces using established criteria SP 2.4 Perform Make, Buy, or Reuse Analyses
- Evaluate whether the product components should be developed, purchased, or reused based on established criteria.
- Implement the Product Design Product components, and associated support documentation, are implemented from
- their designs. Implement the Design
- Implement the designs of the product components. SP 3.2 Develop Product Support Documentation
 - Develop and maintain the end-use documentation. product component interfaces comply with the interface descriptions.
 - SP 3.2 Assemble Product Components

The purpose of Validation is to demonstrate that a product or product component fulfills its

- Select products and product components to be validated and validation methods to be
 - SG 1 Prepare for Verification
 - Preparation for verification is conducted SP 1.1 Select Work Products for Verification
- Select work products to be verified and verification methods to be used. The product or product components are validated to ensure they are suitable for use in SP 1.2 Establish the Verification Environment Establish and maintain the environment needed to support verification.
 - SG 2 Perform Peer Reviews
 - Peer reviews are performed on selected work products. SP 2.1 Prepare for Peer Reviews
 - SP 2.2 Conduct Peer Reviews
 - SP 2.3 Analyze Peer Review Data

 - Selected work products are verified against their specified requirements. SP 3.1 Perform Verification
 - Perform verification on selected work products. SP 3.2 Analyze Verification Results Analyze results of all verification activities

MANAGEMENT

Capability Level 1: Performed

Maturity Levels and Capability Levels

3 Structure of CMMI

Specific Goals

Specific Practices

A performed process is a process that accomplishes the needed work to produce work products; the specific goals of the process area are satisfied.

Process Area 2 Process Area n

Generic Goals

Generic Practices

Achieve Specific Goals The specific goals of the process area are supported by the process by transforming identifiable input work products into identifiable output work products. Perform Specific Practices Perform the specific practices of the process area to develop work products and provide services to achieve the specific goals of the

Capability Level 3: Defined

Institutionalize a Defined Process

A defined process is a managed (capability level 2) process that is tailored from the organization's set of standard processes according to the organization's tailoring guidelines; has a maintained process description; and contributes process related experiences to the organizational process assets.

The process is institutionalized as a defined process. GP 3.1 Establish a Defined Process (see IPM and OPD) Establish and maintain the description of a defined process. GP 3.2 Collect Process Related Experiences (see IPM, OPF, and OPD) Collect process related experiences derived from planning and performing the process to support the future use and improvement of the organization's processes and process assets.

Capability Level 2: Managed

- A managed process is a performed (capability level 1) process that is planned and executed in accordance with policy; employs skilled people having adequate resources to produce controlled outputs: involves relevant stakeholders: is monitored, controlled, and reviewed; and is evaluated for adherence to it's
- process description. GG 2 Institutionalize a Managed Process The process is institutionalized as a managed process.
- GP 2.1 Establish an Organizational Policy Establish and maintain an organizational policy for planning and performing the process. GP 2.2 Plan the Process (see PP) Establish and maintain the plan for performing the process.
- GP 2.3 Provide Resources (see PP) Provide adequate resources for performing the process, developing the work products, and providing the services of the process. GP 2.4 Assign Responsibility (see PP) Assign responsibility and authority for performing the process,
- developing the work products, and providing the services of the GP 2.5 Train People (see OT and PP) Train the people performing or supporting the process as needed. GP 2.6 Control Work Products (see CM)

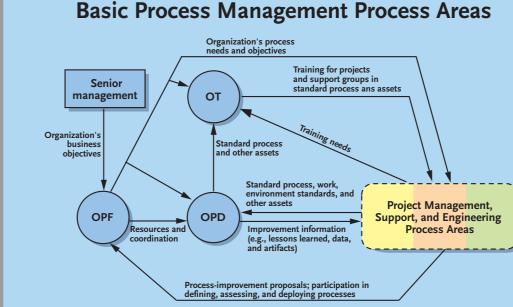
Place selected work products of the process under appropriate levels

- GP 2.7 Identify and Involve Relevant Stakeholders (see PP, PMC, and IPM) Identify and involve the relevant stakeholders of the process as GP 2.8 Monitor and Control the Process (see PMC and MA)
- Monitor and control the process against the plan for performing the process and take appropriate corrective action. GP 2.9 Objectively Evaluate Adherence (see PPQA) Objectively evaluate adherence of the process and selected work products against the process description, standards, and procedures, and address noncompliance

Review the activities, status, and results of the process with higher

GP 2.10 Review Status with Higher Level Management (see PMC)

level management and resolve issues.



Organizational Process Definition (OPD)

Organizational Process Focus (OPF)

- The purpose of Organizational Process Focus is to plan, implement, and deploy organizational process improvements based on a thorough understanding of current strengths and weaknesses of the organization's processes and process assets. Determine Process Improvement Opportunities
- Strengths, weaknesses, and improvement opportunities for the organization's processes are identified periodically and as needed. SP 1.1 Establish Organizational Process Needs Establish and maintain the description of process needs and objectives for the
- SP 1.2 Appraise the Organization's Processes Appraise the organization's processes periodically and as needed to maintain an understanding of their strengths and weaknesses SP 1.3 Identify the Organization's Process Improvements
- Identify improvements to the organization's processes and process assets Plan and Implement Process Actions Process actions that address improvements to the organization's processes and process assets are planned and implemented.
- Establish and maintain process action plans to address improvements to the organization's processes and process assets. SP 2.2 Implement Process Action Plans Implement process action plans.

SP 2.1 Establish Process Action Plans

Requirements Development (RD)

SP 1.2 Transform Stakeholder Needs into Customer Requirements

SP 2.1 Establish Product and Product Component Requirements

The requirements are analyzed and validated

Establish Operational Concepts and Scenarios

Allocate the requirements for each product component

Establish and maintain operational concepts and associated scenarios.

Analyze requirements to ensure that they are necessary and sufficient.

Analyze requirements to balance stakeholder needs and constraints.

Establish and maintain a definition of required functionality and quality attributes.

Engineering Process Areas

Validate requirements to ensure the resulting product will perform as intended in the end

Establish a Definition of Required Functionality and Quality Attributes

Develop Customer Requirements

into customer requirements.

customer requirements.

Develop Product Requirements

SP 2.2 Allocate Product Component Requirement

Identify interface requirements.

Analyze and Validate Requirements

SP 3.4 Analyze Requirements to Achieve Balance

Process Areas

verification and validation

SP 2.3 Identify Interface Requirements

SP 3.3 Analyze Requirements

SP 1.1 Elicit Needs

The purpose of Requirements Development is to elicit, analyze, and establish customer, product,

Stakeholder needs, expectations, constraints, and interfaces are collected and translated

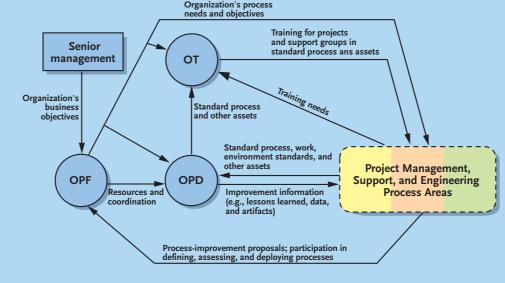
Elicit stakeholder needs, expectations, constraints, and interfaces for all phases of the

Transform stakeholder needs, expectations, constraints, and interfaces into prioritized

Customer requirements are refined and elaborated to develop product and product

Establish and maintain product and product component requirements, which are based

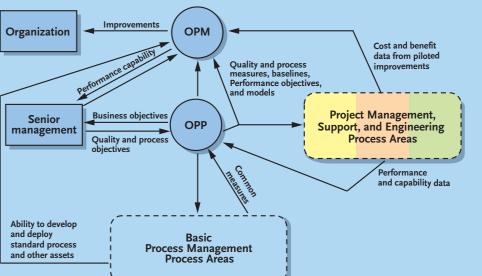
- SG 3 Deploy Organizational Process Assets and Incorporate Experiences Organizational process assets are deployed across the organization and process related
- SP 3.1 Deploy Organizational Process Assets Deploy organizational process assets across the organization. SP 3.2 Deploy Standard Processes Deploy the organization's set of standard processes to projects at their startup and deploy changes to them as appropriate throughout the life of each project.
- SP 3.3 Monitor the Implementation Monitor the implementation of the organization's set of standard processes and use of process assets on all projects. SP 3.4 Incorporate Experiences into Organizational Process Assets Incorporate process related experiences derived from planning and performing the



- The purpose of Organizational Process Definition is to establish and maintain a usable set of organizational process assets, work environment standards, and rules and guidelines for teams.
- **Establish Organizational Process Assets** A set of organizational process assets is established and maintained. Establish Standard Processes
- Establish and maintain the organization's set of standard processes. SP 1.2 Establish Lifecycle Model Descriptions Establish and maintain descriptions of lifecycle models approved for use in the
- SP 1.3 Establish Tailoring Criteria and Guidelines Establish and maintain tailoring criteria and guidelines for the organization's set of
- SP 1.4 Establish the Organization's Measurement Repository Establish and maintain the organization's measurement repository Establish the Organization's Process Asset Library Establish and maintain the organization's process asset library. SP 1.6 Establish Work Environment Standards

Establish and maintain work environment standard SP 1.7 Establish Rules and Guidelines for Teams Establish and maintain organizational rules and guidelines for the structure, formation, and operation of teams.

Advanced Process Management Process Areas



Organizational Process Performance (OPP)

The purpose of Organizational Process Performance is to establish and maintain a quantitative understanding of the performance of selected processes in the organization's set of standard processes in support of achieving quality and process performance objectives, and to provide process performance data, baselines, and models to quantitatively manage the organization's

- Establish Performance Baselines and Models organization's set of standard processes, are established and maintained.
- Establish and maintain the organization's quantitative objectives for quality and process performance, which are traceable to business objectives. SP 1.2 Select Processes Select processes or subprocesses in the organization's set of standard processes to be included in the organization's process performance analyses and maintain traceability to
- SP 1.3 Establish Process-Performance Measures Establish and maintain definitions of measures to be included in the organization's process performance analyses. SP 1.4 Analyze Process Performance and Establish Process Performance Baselines Analyze the performance of the selected processes, and establish and maintain the

process performance baseline

SP 1.5 Establish Process-Performance Models Establish and maintain process performance models for the organization's set of standard processes.

Product Integration (PI)

The purpose of Product Integration (PI) is to assemble the product from the product components,

- ensure that the product, as integrated, behaves properly (i.e., possesses the required functionality and quality attributes), and deliver the product.
- SG 1 Prepare for Product Integration Preparation for product integration is conducted. SP 1.1 Establish an Integration Strategy
- Establish and maintain a product integration strategy. SP 1.2 Establish the Product Integration Environment Establish and maintain the environment needed to support the integration of the product
- SP 1.3 Establish Product Integration Procedures and Criteria Establish and maintain procedures and criteria for integration of the product
- SG 2 Ensure Interface Compatibility The product component inte<mark>rfaces, both intern</mark>al and external, are compatible. SP 2.1 Review Interface Descriptions for Completeness Review interface descriptions for coverage and completeness.
- SP 2.2 Manage Interfaces Manage internal and external interface definitions, designs, and changes for products and product components. SG 3 Assemble Product Components and Deliver the Product Verified product components are assembled and the integrated, verified, and validated
- product is delivered. SP 3.1 Confirm Readiness of Product Components for Integration Confirm, prior to assembly, that each product component required to assemble the product has been properly identified, behaves according to its description, and that the
- Assemble product components according to the product integration strategy and SP 3.3 Evaluate Assembled Product Components Evaluate assembled product components for interface compatibility.

Package the assembled product or product component and deliver it to the customer.

Verification (VEF

The purpose of Verification is to ensure that selected work products meet their specified

SP 3.4 Package and Deliver the Product or Product Component

- SP 1.3 Establish Verification Procedures and Criteria Establish and maintain verification procedures and criteria for the selected work
- Prepare for peer reviews of selected work products.
- Conduct peer reviews of selected work products and identify issues resulting from these
 - Analyze data about the preparation, conduct, and results of the peer reviews. SG 3 Verify Selected Work Products

PROCESS MANAGEMENT

- **Organizational Training (OT)**
- The purpose of Organizational Training is to develop skills and knowledge of people so they can perform their roles effectively and efficiently. SG 1 Establish an Organizational Training Capability A training capability, which supports the roles in the organization, is established and
- SP 1.1 Establish Strategic Training Needs Establish and maintain strategic training needs of the organization. SP 1.2 Determine Which Training Needs Are the Responsibility of the Organization Determine which training needs are the responsibility of the organization and which are
- left to the individual project or support group. SP 1.3 Establish an Organizational Training Tactical Plan Establish and maintain an organizational training tactical plan. SP 1.4 Establish a Training Capability Establish and maintain a training capability to address organizational training needs.

Establish and maintain records of organizational training.

Training for individuals to perform their roles effectively is provided. SP 2.1 Deliver Training

SP 2.2 Establish Training Records

SP 2.3 Assess Training Effectiveness

actual performance results

Organizational Performance Management (OPM)

Assess the effectiveness of the organization's training program.

Deliver training following the organizational training tactical plan.

The purpose of Organizational Performance Management is to proactively manage the organization's performance to meet its business objectives.

The organization's business performance is managed using statistical and other SP 1.1 Maintain Business Objectives Maintain business objectives based on an understanding of business strategies and

SP 1.2 Analyze Process Performance Data Analyze process performance data to determine the organization's ability to meet identified business objectives. SP 1.3 Identify Potential Areas for Improvement Identify potential areas for improvement that could contribute to meeting business

SG 2 Select Improvements Improvements are proactively identified, evaluated using statistical and other quantitative techniques, and selected for deployment based on their contribution to meeting quality and process performance objectives. SP 2.1 Elicit Suggested Improvements

Elicit and categorize suggested improvements. SP 2.2 Analyze Suggested Improvements Analyze suggested improvements for their possible impact on achieving the organization's quality and process performance objectives. SP 2.3 Validate Improvements Validate selected improvements.

SP 2.4 Select and Implement Improvements for Deployment

SP 3.2 Manage the Deployment

on an evaluation of costs, benefits, and other factors.

Measurable improvements to the organization's processes and technologies are deployed and evaluated using statistical and other quantitative techniques. SP 3.1 Plan the Deployment Establish and maintain plans for deploying selected improvements.

Select and implement improvements for deployment throughout the organization based

Manage the deployment of selected improvements. SP 3.3 Evaluate Improvement Effects Evaluate the effects of deployed improvements on quality and process performance using statistical and other quantitative techniques.

- Baselines and models, which characterize the expected process performance of the SP 1.1 Establish Quality and Process Performance Objectives

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plans and work products.

- Obtain commitment to requirements from project participants.
- services from suppliers.
- Agreements with suppliers are satisfied by both the project and the supplier. SP 2.1 Execute the Supplier Agreement
- SG 1 Use the Project's Defined Process
- project's defined process Establish and maintain teams

SP 2.2 Manage Dependencies

Measurement and Analysis (MA)

- used to support management information needs. SG 1 Align Measurement and Analysis Activities Measurement objectives and activities are aligned with identified information needs and
- SP 1.4 Specify Analysis Procedures Specify how measurement data are analyzed and communicated.

SP 2.1 Obtain Measurement Data

Obtain specified measurement data

SP 1.1 Establish Measurement Objectives

- SP 2.4 Communicate Results Communicate results of measurement and analysis activities to all relevant stakeholders.
- Evaluate Alternatives Decisions are based on an evaluation of alternatives using established criteria. SP 1.1 Establish Guidelines for Decision Analysis Establish and maintain guidelines to determine which issues are subject to a formal
- SP 1.3 Identify Alternative Solutions SP 1.4 Select Evaluation Methods Select evaluation methods.

evaluation process.

SP 1.2 Establish Evaluation Criteria

- SP 1.5 Evaluate Alternative Solutions SP 1.6 Select Solutions

Estimates of project planning parameters are established and maintained.

- SP 1.3 Define Project Lifecycle Phases
- SP 1.5 Ensure Alignment Between Project Work and Requirements
- Select suppliers based on an evaluation of their ability to meet the specified requirement
- Ensure that the supplier agreement is satisfied before accepting the acquired product.

- SP 1.7 Contribute to Organizational Process Assets

The purpose of Measurement and Analysis is to develop and sustain a measurement capability

Establish and maintain measurement objectives derived from identified information

Measurement results, which address identified information needs and objectives, are

- SP 1.2 Specify Measures Specify measures to address measurement objectives. Specify how measurement data are obtained and stored.
- SP 2.2 Analyze Measurement Data Analyze and interpret measurement data SP 2.3 Store Data and Results Manage and store measurement data, measurement specifications, and analysis results.

Decision Analysis and Resolution (DAR)

- The purpose of Decision Analysis and Resolution is to analyze possible decisions using a formal evaluation process that evaluates identified alternatives against established criteria.
- Establish and maintain criteria for evaluating alternatives and the relative ranking of these Identify alternative solutions to address issues.
- Evaluate alternative solutions using established criteria and methods. Select solutions from alternatives based on evaluation criteria.

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Example: Capability Levels of Requirements Development (RD)

CL o: Incomplete CL 1: Performed CL 2: Managed CL 3: Defined

GG 2

all Generic

Practices of

GP 2.x

capability level 2

MORE INFORMATION

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all Generic

Practices of

GP 3.x

capability level 3