CALIFORNIA STATE UNIVERSITY
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COLLEGE OF ENGINEERING
AND COMPUTER SCIENCE

Advanced Software Process

SCAMPI

Standard CMMI Appraisal Method for Process Improvement

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Objectives

- The objective of this presentation is for those:
  - Who want to learn CMM/CMMI
  - Who want to understand and improve their capability to develop software effectively
  - Who want to understand the key practices that are part of effective processes for developing or maintaining software, and to identify the key practices that are needed to achieve the next maturity level in the CMMI
  - Who want to identify the risks of having a particular organization perform the work of a contract

SCAMPI

- Standard CMMI Appraisal Method for Process Improvement (SCAMPI^{SM})

Appraisals and Benchmarking

- Many organizations find value in benchmarking their progress (e.g., ascertaining maturity level scores, a capability level profile) in process improvement for both internal purposes and with external customers and suppliers.
- Process appraisals focus on identifying improvement opportunities and understanding the organization's position relative to the selected model or standard.

Appraisals and Benchmarking

- Appraisal teams use CMMI to guide their identification and prioritization of findings.
- These findings, with guidance provided by CMMI practices, are used to plan improvements for the organization.
- The appraisal principles for the CMMI Product Suite remain the same as those used in appraisals for other process-improvement models.

Appraisals and Benchmarking

- Those principles are:
  - Senior management sponsorship
  - A focus on the organization's business objectives
  - Confidentiality for interviewees
  - Use of a documented appraisal method
  - Use of a process reference model (CMMI) as a base
  - A collaborative team approach
  - A focus on actions for process improvement

Appraisals and Benchmarking

- The CMMI Product Suite provides a rigorous appraisal method for benchmarking that implements these appraisal principles.
- It is called the Standard CMMI Appraisal Method for Process Improvement (SCAMPI^{SM}).

Appraisals and Benchmarking

- For benchmarking against other organizations, appraisals must ensure consistent ratings.
- The achievement of a specific maturity level or the satisfaction of a process area must mean the same thing for different appraised organizations.
- Rules for ensuring this consistency are provided in the SCAMPI Method Definition Document (MDD).

Appraisals and Benchmarking

- The International Organization for Standardization and International Electro-technical Commission (ISO/IEC) Technical Report 15504 is an emerging standard for SW process assessment.
  - The CMMI models and SCAMPI were written to support the conduct of appraisals that conform to the 1998 version of Technical Report 15504.
  - Sponsors interested in performing an ISO/IEC 15504-conformant CMMI appraisal must provide necessary information including a demonstration of compatibility to support their needs.

Appraisal Considerations

- Choices that affect a CMMI-based appraisal include the following:
  - Establishing the appraisal scope, including the organizational entity to be appraised, the CMMI process areas to be investigated, and the maturity level or capability level(s) to be appraised.
  - Selecting the appraisal method
  - Selecting the appraisal team members
  - Selecting appraisal participants from the appraisal entities to be interviewed
  - Establishing appraisal outputs (e.g., ratings, instantiation-specific findings)
  - Establishing appraisal constraints (e.g., time spent on site)

SCAMPI MDD

Standard CMMI® Appraisal Method for Process Improvement (SCAMPI^{SM}) A, Version 1.3: Method Definition Document (MDD)

CMU/SEI-2011-HB-001

SCAMPI MDD

- The Standard CMMI® Appraisal Method for Process Improvement (SCAMPI[SM]) A is designed to provide benchmark quality ratings relative to Capability Maturity Model® Integration (CMMI) models.
  - It is applicable to a wide range of appraisal usage modes, including both internal process improvement and external capability determinations.
  - SCAMPI A satisfies all of the Appraisal Requirements for CMMI (ARC) requirements for a Class A appraisal method.

  Source: http://resources.sei.cmu.edu/library/asset-view.cfm?assetid=9703, 2011

SCAMPI MDD

- The SCAMPI v1.3 Class A Method Definition Document (MDD) describes the requirements, activities, and practices associated with each of the processes that compose the SCAMPI A method.
  - It is intended to be one of the elements of the infrastructure within which SCAMPI Lead AppraisersSM conduct a SCAMPI A appraisal.
  - Precise listings of required practices, parameters, and variation limits, as well as optional practices and guidance for enacting the method, are covered.
  - An overview of the method's context, concepts, and architecture is also provided.

SCAMPI MDD
Table 2 Part II Contents

Phase	Process	Page Number
1: Plan and Prepare for Appraisal	1.1 Analyze Requirements	37
	1.2 Develop Appraisal Plan	59
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	1.5 Prepare for Appraisal Conduct	104
2: Conduct Appraisal	2.1 Prepare Participants	113
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	2.6 Generate Appraisal Results	155
3: Report Results	3.1 Deliver Appraisal Results	165
	3.2 Package and Archive Appraisal Assets	173

SCAMPI MDD

- People who will enact an appraisal (appraisers) are expected to read the second part of the document (MDD).
  - Appraisers need to know how to enact the method, not just what the method is.
- MDD's Part II is divided into Process Definitions, which are in turn divided into Activity Descriptions.
  - Each Activity Description delineates Required Practices, Parameters and Limits, Optional Practices, and Implementation Guidance.

SCAMPI MDD

- There are **several processes** contained in SCAMPI A.
- The processes (as defined) support a variety of orderings and enactments to facilitate a variety of usage modes for SCAMPI A.
- The temporal flow, as well as the flow of inputs and outputs among the processes, is described in the Method Overview section.
- The Process Definitions are not intended to provide a start-to-finish view of SCAMPI A.
- Instead, these sections provide detailed definitions of processes and activities that are invoked according to the appraisal plan created by the appraisal team leader.

SCAMPI MDD

Source: http://resources.sei.cmu.edu/library/asset-view.cfm?assetid=9703 , 2011

Table 4: Process Definition Elements

Table 4: Process Definition Elements

Element	Description
Purpose	A brief summary of what is accomplished by enacting the process
Entry Criteria	Conditions that must be met before enacting the process
Inputs	Artifacts or information needed to enact the process
Activities	The set of actions which, in combination, make up the process
Outputs	Artifacts and assets that result from enacting the process
Outcome	Any change in important conditions or artifacts that results from enacting the process
Exit Criteria	Conditions to be met before the process can be considered complete
Key Points	A summary of the most notable events associated with the process
Tools and Techniques	Work aids commonly used in enacting the process
Metrics	Useful measures that support the process enactment, or future enactments
Verification and Validation	Techniques to verify and/or validate the enactment of the process
Records	Information to be retained for future use
Interfaces with Other Processes	A discussion of how the process interacts with other processes in the method
Summary of Activities	A narrative summary of the set of activities

SCAMPI MDD

- Table 5: Activity Elements

Table 5: Activity Elements

Element	Description
Activity Description	A brief overview of what is accomplished by enacting the activity
Required Practices	A listing of practices that must be implemented to consider the enactment a valid SCAMPI A
Parameters and Limits	Acceptable limits for things that are allowed to vary, and acceptable limits for things under the discretion of the appraisal team leader
Implementation Guidance	A narrative description of advice or things to consider in performing the activity

SCAMPI Appraisal Classes

- The SCAMPI family of appraisals includes Class A, B, and C appraisal methods.
- The Appraisal Requirements for CMMI (ARC) describes a full benchmarking class of appraisal as Class A.
- Other CMMI-based appraisal methods might be more appropriate for a given set of sponsor needs, including self-assessments, initial appraisals, quick-look or mini-appraisals, incremental appraisals, and external appraisals.

SCAMPI Appraisal Classes

- **SCAMPI A** is the most rigorous method and the only method that can result in a rating.
- **SCAMPI B** provides options in model scope, but the characterization of practices is fixed to one scale and is performed on implemented practices.
- **SCAMPI C** provides a wide range of options, including characterization of planned approaches to process implementation according to a scale defined by the user.

SCAMPI Appraisal Classes

- Characteristics of Appraisal Classes

Characteristic	Class A	Class B	Class C
Amount of objective evidence	High	Medium	Low
Ratings generated	Yes	No	No
Resource needs	High	Medium	Low
Team size	Large	Medium	Small

SCAMPI Appraisal Classes

- SCAMPI incorporates best practices found successful in the appraisal community, and is based on the features of several legacy appraisal methods, including:
  - CMM-Based Appraisal for Internal Process Improvement (CBA IPI) V1.1 [Dunaway 96b]
  - Electronic Industries Alliance/Interim Standard (EIA/IS) 731.2 Appraisal Method [EIA 98b]
  - Software Capability Evaluation (SCESM) V3.0 Method Description [Byrnes 96]
  - Software Development Capability Evaluation (SDCE) [AFMC 94]
  - FAA Appraisal Method (FAM) [Ibrahim 99]

SCAMPI Appraisal Classes

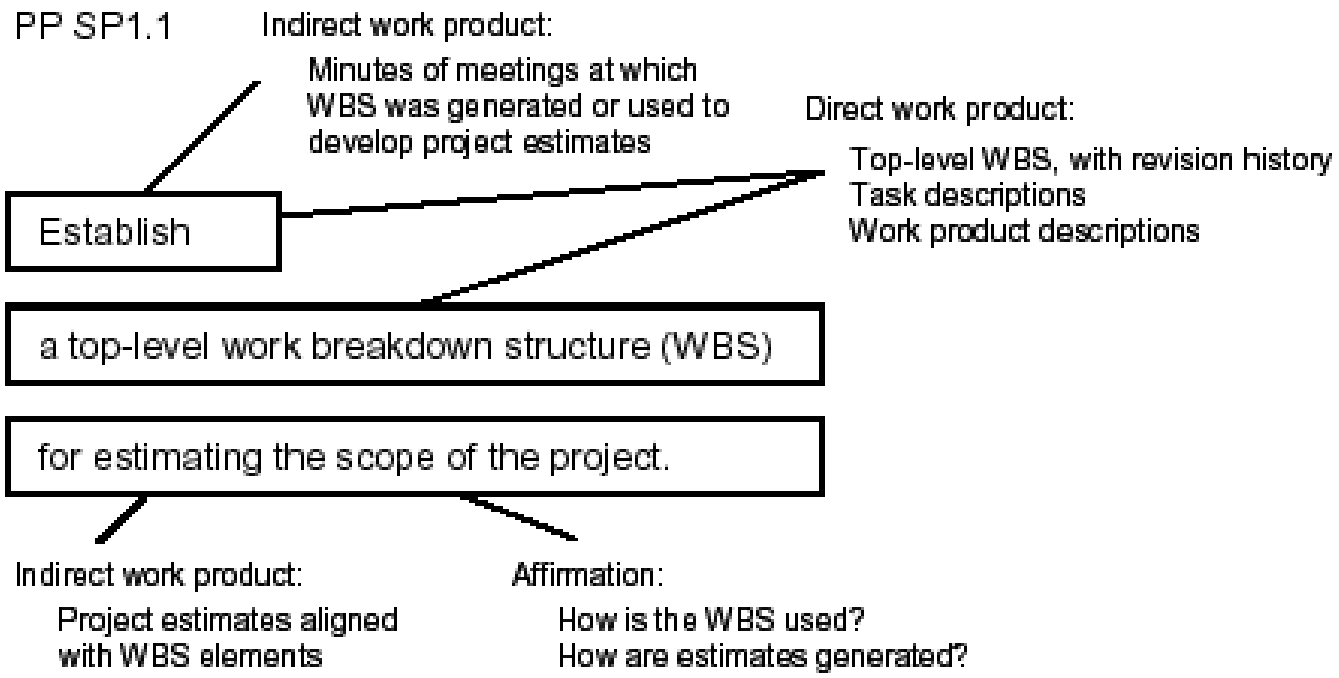
Practice Implementation Indicator (PII) Types

In MDD v.1.3 there is no distinction between DA and IA.

Indicator Type	Description	Examples
Direct artifacts	The tangible outputs resulting directly from implementation of a specific or generic practice. An integral part of verifying practice implementation. May be explicitly stated or implied by the practice statement or associated informative material.	Typical work products listed in reference model practices Target products of an "Establish and Maintain" specific practice Documents, deliverable products, training materials, etc.
Indirect artifacts	Artifacts that are a consequence of performing a specific or generic practice or that substantiate its implementation, but which are not the purpose for which the practice is performed. This indicator type is especially useful when there may be doubts about whether the intent of the practice has been met (e.g., an artifact exists but there is no indication of where it came from, who worked to develop it, or how it is used).	Typical work products listed in reference model practices Meeting minutes, review results, status reports, presentations, etc. Performance measures
Affirmations	Oral or written statements confirming or supporting implementation (or lack of implementation) of a specific or generic practice. These statements are usually provided by the implementers of the practice and/or internal or external customers, but may also include other stakeholders (e.g., managers and suppliers).	Instruments Interviews Presentations, demonstrations, etc.

SCAMPI Appraisal Classes

An example of how Practice Implementation Indicator (PII) for each indicator types can be used in verifying the implementation of a model practice



SCAMPI

Table 9: SCAMPI A Phase Summary: Plan and Prepare for Appraisal

Phase	Process	Purpose	Activities
1 Plan and Prepare for Appraisal	1.1 Analyze Requirements	Understand the business needs of the organizational unit for which the appraisal is being requested. The appraisal team leader will collect information and help the appraisal sponsor match appraisal objectives with their business objectives.	1.1.1 Determine Appraisal Objectives 1.1.2 Determine Data Collection Strategy 1.1.3 Determine Appraisal Constraints 1.1.4 Determine Appraisal Scope 1.1.5 Determine Appraisal Outputs 1.1.6 Obtain Commitment to Initial Appraisal Plan
	1.2 Develop Appraisal Plan	Document the results of appraisal planning including the requirements, agreements, estimates, risks, method tailoring, and practical considerations (e.g., schedules, logistics, and contextual information about the organization) associated with the appraisal. Obtain and record the sponsor's approval of the appraisal plan.	1.2.1 Tailor Method 1.2.2 Identify Needed Resources 1.2.3 Develop Data Collection Plan 1.2.4 Determine Cost and Schedule 1.2.5 Plan and Manage Logistics 1.2.6 Document and Manage Risks 1.2.7 Obtain Commitment to Appraisal Plan
	1.3 Select and Prepare Team	Ensure that an experienced, objective, trained, and appropriately qualified team is available and prepared to execute the appraisal process.	1.3.1 Identify Appraisal Team Leader 1.3.2 Select Team Members 1.3.3 Document and Manage Conflicts of Interest 1.3.4 Prepare Team
	1.4 Obtain and Inventory Initial Objective Evidence	Obtain information that facilitates site-specific preparation and an understanding of the implementation of model practices across the organizational unit. Identify potential issues, gaps, or risks to aid in refining the plan. Strengthen the appraisal team members' understanding of the organization's operations and processes.	1.4.1 Obtain Initial Objective Evidence 1.4.2 Inventory Objective Evidence
	1.5 Prepare for Appraisal Conduct	Ensure readiness to conduct the appraisal, including confirmation of the availability of objective evidence, appraisal team commitment, logistics arrangements, risk status and associated mitigation plans. Plan and document data collection strategies.	1.5.1 Perform Readiness Review 1.5.2 Re-Plan Data Collection

SCAMPI

Table 10: SCAMPI A Phase Summary: Conduct Appraisal

Phase	Process	Purpose	Activities
2 Conduct Appraisal	2.1 Prepare Participants	Ensure that appraisal participants are appropriately informed of the appraisal process, purpose, and objectives and are available to participate in the appraisal process.	2.1.1 Conduct Participant Briefing
	2.2 Examine Objective Evidence	Examine information about the practices implemented in the organization and relate the resultant data to the appraisal reference model. Perform the activity in accordance with the data collection plan. Take corrective actions and revise the data collection plan as needed.	2.2.1 Examine Objective Evidence from Artifacts 2.2.2 Examine Objective Evidence from Affirmations
	2.3 Document Objective Evidence	Create lasting records of the information gathered by identifying and then consolidating notes, transforming the data into records that document gaps in practice implementation or exemplary practice implementation.	2.3.1 Take/Review/Tag Notes 2.3.2 Record Presence/Absence of Objective Evidence 2.3.3 Document Practice Implementation 2.3.4 Review and Update the Data Collection Plan

SCAMPI

Table 10: SCAMPI A Phase Summary: Conduct Appraisal

Phase	Process	Purpose	Activities
	2.4 Verify Objective Evidence	Verify the sufficiency of objective evidence to determine the implementation of model practices for each instantiation. Describe any strengths and weaknesses in the implementation of model practices. Each implementation of each practice is verified so that it may be compared to the practices of the reference model. Then the team characterizes the extent to which the practices in the model are implemented.	2.4.1 Verify Objective Evidence 2.4.2 Characterize Implementation of Model Practices and Generate Preliminary Findings
	2.5 Validate Preliminary Findings	Validate preliminary findings, including weaknesses (i.e., gaps in practice implementation) and strengths (i.e., exemplary implementation of model practices) with members of the organizational unit.	2.5.1 Validate Preliminary Findings
	2.6 Generate Appraisal Results	Rate goal satisfaction based on the extent of practice implementation throughout the organizational scope of the appraisal. The extent of practice implementation is judged based on validated data (e.g., artifact and affirmation objective evidence) collected from the entire representative sample of the organizational unit. Aggregate ratings (process area ratings, maturity level ratings, capability ratings, etc.) are driven by the goal satisfaction ratings.	2.6.1 Derive Findings and Rate Goals 2.6.2 Determine Process Area Ratings 2.6.3 Determine Process Area Profile 2.6.4 Determine Maturity Level 2.6.5 Document Appraisal Results

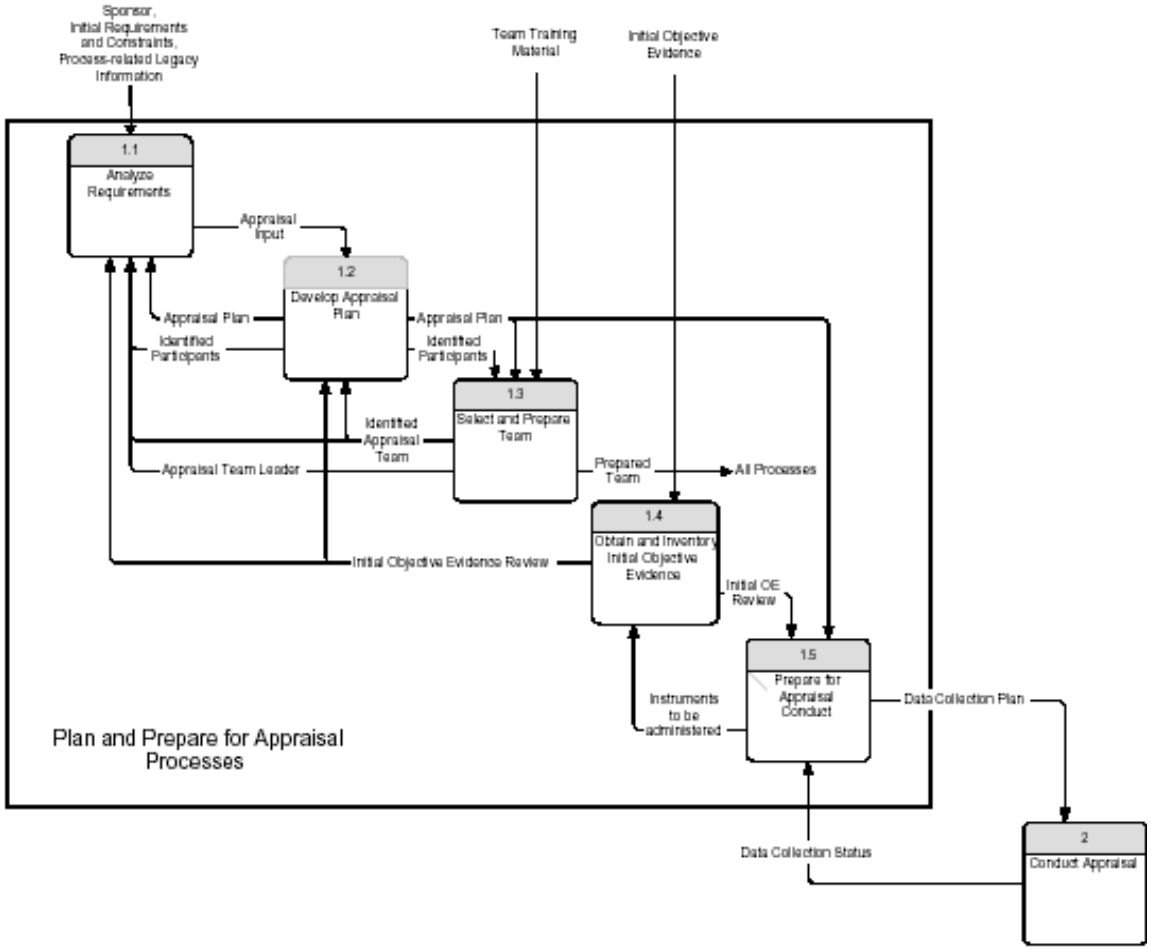
SCAMPI

Table 11: SCAMPI A Phase Summary: Report Results

Phase	Process	Purpose	Activities
3 Report Results	3.1 Deliver Appraisal Results	Provide credible appraisal results that can be used to guide actions. Represent the strengths and weaknesses of the processes in use at the time. Provide ratings (if planned for) that accurately reflect the capability level or maturity level of the processes in use.	3.1.1 Deliver Final Findings 3.1.2 Conduct Executive Session(s) 3.1.3 Plan for Next Steps
	3.2 Package and Archive Appraisal Assets	Preserve important data and records from the appraisal, and dispose of sensitive materials in an appropriate manner.	3.2.1 Collect Lessons Learned 3.2.2 Generate Appraisal Record 3.2.3 Provide Appraisal Feedback to the SEI 3.2.4 Archive and/or Dispose of Key Artifacts

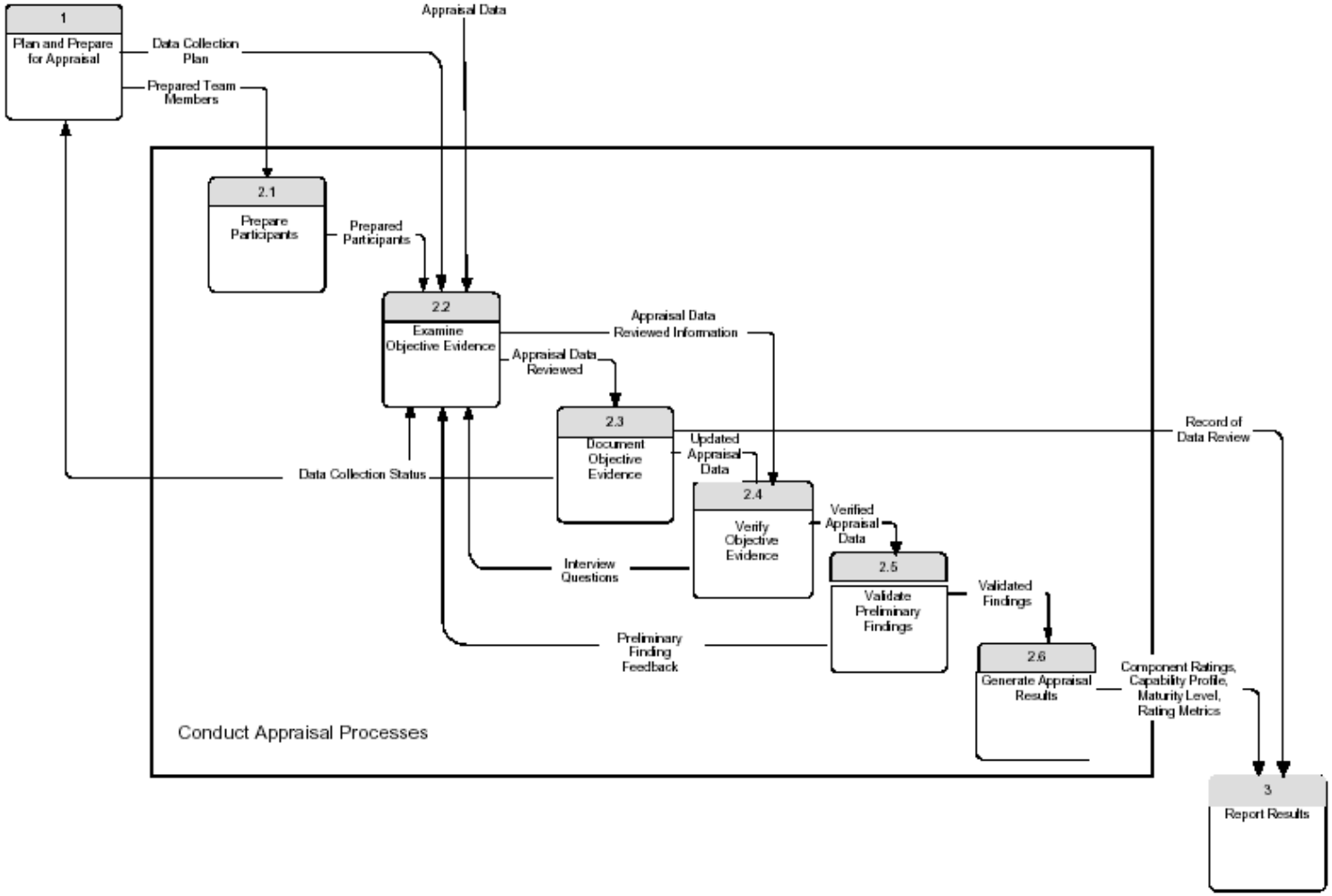
SCAMPI

Process Flows, Plan and Prepare Processes



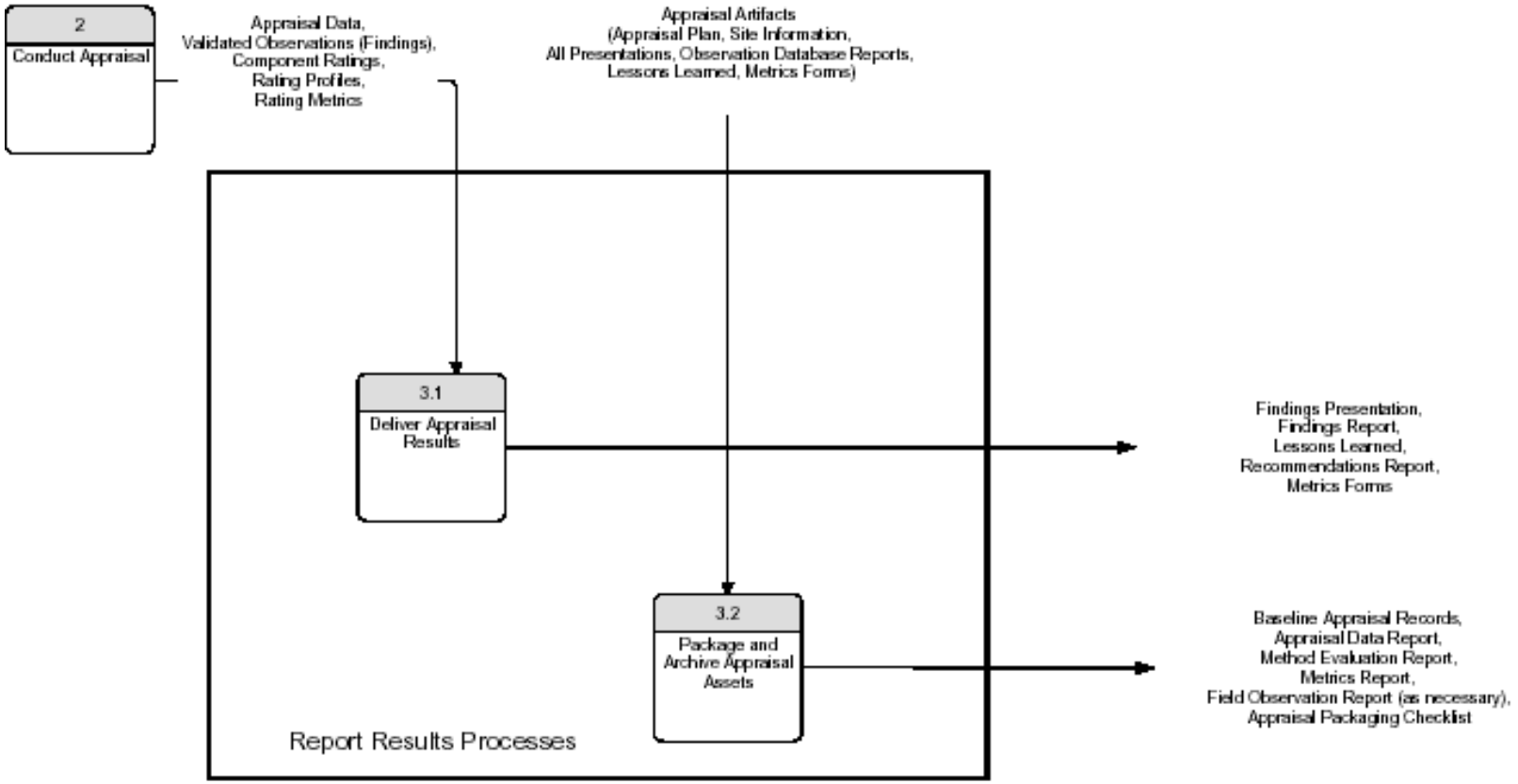
SCAMPI

Process Flows, Conduct Appraisal Processes



SCAMPI

Process Flows, Report Results Processes



MDD Process

MDD - SCAMPI - Phase 1

- Process Definition 1.1
- Process Activity 1.1.1, …
- SCAMPI Phase Summary:
  - MDD Table 9, 10, 11
- Format
  - Table 4 Process Definition Elements
  - Table 5 Activity Elements

Phase	Process	Purpose	Activities
1 Plan and Prepare for Appraisal	1.1 Analyze Requirements	Understand the business needs of the organizational unit for which the appraisal is being requested. The appraisal team leader will collect information and help the appraisal sponsor match appraisal objectives with their business objectives.	1.1.1 Determine Appraisal Objectives 1.1.2 Determine Data Collection Strategy 1.1.3 Determine Appraisal Constraints 1.1.4 Determine Appraisal Scope 1.1.5 Determine Appraisal Outputs 1.1.6 Obtain Commitment to Initial Appraisal Plan

1 Plan and Prepare for Appraisal

1.1 Analyze Requirements

Purpose

Understand the business needs of the organization for which the appraisal is being requested. The appraisal team leader will collect information and help the appraisal sponsor match appraisal objectives with their business objectives.

Determine and communicate the strategy for collecting appraisal evidence. The appraisal team leader will work with the appraisal sponsor to determine the overall strategy for collecting appraisal information. This strategy will form the basis for the appraisal data collection plan.

Entry Criteria

- An appraisal sponsor has decided that a SCAMPI appraisal should be performed.
- People who can provide statements of requirements for the appraisal are available.

Inputs

- sponsor appraisal objectives
- initial requirements and constraints
- process-related legacy information
- business objectives

Activities

1.1.1 Determine Appraisal Objectives
1.1.2 Determine Data Collection Strategy
1.1.3 Determine Appraisal Constraints
1.1.4 Determine Appraisal Scope
1.1.5 Determine Appraisal Outputs
1.1.6 Obtain Commitment to Initial Appraisal Plan

Outputs

Initial Appraisal Plan

Outcome

The decision to proceed with the appraisal based on a shared understanding of the appraisal objectives, constraints, outputs, and scope.

SCAMPI

MDD 2.4 Verify Objective Evidence

MDD 2.4.2 Characterize Implementation of Model Practices

- Rules for characterizing instantiation-level implementations of practices
- Consensus of at least a subset of appraisal team members (mini-team) is necessary for instantiation-level characterizations.
- The appraisal team shall:
  - characterize, for each instantiation, the extent to which appraisal reference model practices are implemented
  - aggregate practice implementation characterization values from the instantiation level to the organizational unit level

Label	Meaning
Fully Implemented (FI)	Sufficient artifacts and/or affirmations are present (per 1.1.4, Determine Appraisal Scope and 2.4.1, Verify Objective Evidence) and judged to be adequate to demonstrate practice implementation, and no weaknesses are noted.
Largely Implemented (LI)	Sufficient artifacts and/or affirmations are present (per 1.1.4 and 2.4.1) and judged to be adequate to demonstrate practice implementation, and one or more weaknesses are noted.
Partially Implemented (PI)	Some or all data required (per 1.1.4, Determine Appraisal Scope and 2.4.1, Verify Objective Evidence) are absent or judged to be inadequate, some data are present to suggest some aspects of the practice are implemented, and one or more weaknesses are noted. OR Data supplied to the team (artifacts and/or affirmations) conflict –some data indicate the practice is implemented and some data indicate the practice is not implemented, and one or more weaknesses are noted.
Not Implemented (NI)	Some or all data required (per 1.1.4, Determine Appraisal Scope and 2.4.1, Verify Objective Evidence) are absent or judged to be inadequate, data supplied does not support the conclusion that the practice is implemented, and one or more weaknesses are noted.
Not Yet (NY)	The basic unit or support function has not yet reached the stage in the sequence of work, or point in time to have implemented the practice.

SCAMPI

MDD 2.4 Verify Objective Evidence

MDD 2.4.2 Characterize Implementation of Model Practices

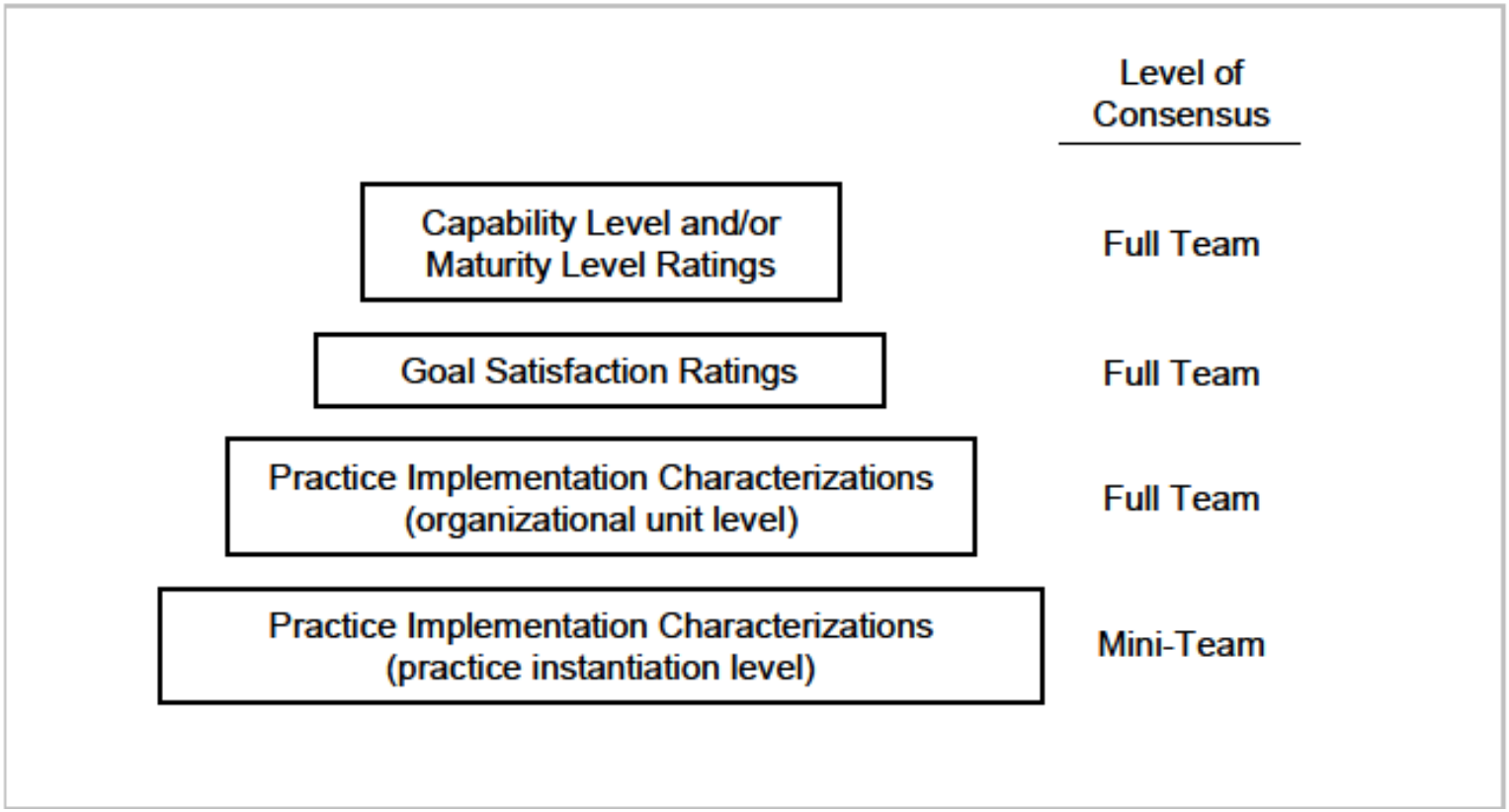
- Rules for aggregating instantiation-level characterizations to derive organizational unit-level characterizations
- Consensus of all members of the appraisal team is necessary for organizational unit-level characterizations.

Implementations	Out-come	Remarks
All FI or NY, with at least one FI	FI	All implementations are characterized FI or NY, with at least one FI.
All LI or FI or NY, with at least one LI	LI	All implementations are characterized LI or FI or NY, with at least one LI.
At least one LI or FI and at least one PI or NI	LI or PI	There is at least one implementation that is characterized as LI or FI and at least one implementation that is characterized as PI or NI. Team judgment is applied to choose LI or PI based on whether the weaknesses, in aggregate, have a significant negative impact on goal achievement.
All PI or NI or NY, with at least one PI	PI	All implementations are characterized PI or NI or NY, with at least one PI.
All NI or NY, with at least one NI	NI	All implementations are characterized NI or NY, with at least one NI.
All NY	NY	All implementations are characterized NY. There are no basic units or support functions within the organizational unit that have yet reached the stage in the sequence of work to have implemented the practice. (Note: If literally *all* basic units and support functions in an organizational unit have not reached the stage in the sequence of work to have implemented the practice, but will in the future, no rating can be given for the associated goal.)

SCAMPI

Data Collection, Rating, and Reporting

- The SCAMPI A data transformation and rating process



SCAMPI

MDD 2.6.1

Derive Findings and Rate Goals

- The appraisal team shall derive final findings using preliminary findings statements, feedback from validation activities, and any additional objective evidence collected as a result of the validation activities.
- The appraisal team shall rate each specific goal (SG) and generic goal (GG) within the reference model scope of the appraisal, based on the practice implementation characterizations at the organizational unit level as well as the aggregation of weaknesses associated with that goal.
- The appraisal team shall obtain appraisal team consensus on the findings statements and ratings generated for the organizational unit level.

SCAMPI

MDD 2.6.1
Derive Findings and Rate Goals

- When deriving final findings, the aim is to create goal-level statements that summarize the gaps in practice implementation.
- These statements must be abstracted to the level of the organizational unit, and cannot focus on individual projects or increments (unless the tailoring option for project- or increment-specific findings has been agreed on during planning).

SCAMPI

MDD 2.6.1
Derive Findings and Rate Goals

- A goal must be rated Not Rated if there are any associated practices that are not characterized at the organizational unit level or that are characterized as Not Yet at the organizational unit level.
- A goal is rated Not Rated if the associated set of objective evidence does not meet the defined criteria for sufficient data coverage.

SCAMPI

MDD 2.6.1
Derive Findings and Rate Goals

- The goal is rated Satisfied if and only if both of the following are true:
  - All associated practices are characterized at the organizational unit level as either Largely Implemented (LI) or Fully Implemented (FI).
  - The aggregation of weaknesses associated with the goal does not have a significant negative impact on goal achievement.
- For a goal to be rated as Unsatisfied, the team must be able to describe how the set of documented weaknesses (or single weakness) led to this rating.

SCAMPI

MDD 2.6.2
Determine Process Area Ratings

- If process area ratings are selected as an appraisal output by the sponsor, the appraisal team shall do the following:
  - If using a continuous representation, assign a **capability level** to each process area within the scope of the appraisal, based on the highest level for which all specific goals and generic goals within the appraisal scope have been satisfied. (See the parameters and limits section for a more specific discussion.)

SCAMPI

MDD 2.6.2

Determine Process Area Ratings

- If using a staged representation, rate the satisfaction of each process area within the scope of the appraisal, based on the satisfaction ratings assigned to all goals included in that process area.
- If any of the goals are rated Not Rated and none of the other goals are rated Unsatisfied, then the process area is rated Not Rated.
- When a process area is determined to be outside of the organizational unit's scope of work, the process area is designated as "Not Applicable" and is Not Rated.
- When an applicable process area is outside of the scope of the model used for the appraisal, the process area is designated as "Out of Scope" and is Not Rated.

SCAMPI

MDD 2.6.2
Determine Process Area Ratings

- (From conventional practices)
- If using a staged representation, rate the satisfaction of each PA.
  - PAs must be assigned rating values of Satisfied, Unsatisfied, Not Applicable, Out of Scope, or Not Rated.
  - A PA is rated Satisfied if and only if all of its SGs and GGs associated with a given maturity level and below are rated Satisfied.
  - If even one of the goals associated with a given maturity level in a PA is rated Unsatisfied, then the PA is rated Unsatisfied for that maturity level and above.

SCAMPI

MDD 2.6.2

Determine Process Area Ratings

- For an appraisal using a continuous representation, the following table defines the basis for **CL ratings**.
- For an appraisal using a staged representation model, **the "satisfied" rating** for a PA may depend on the target ML for the appraisal.
  - Rating a PA "staged at ML 2" as "satisfied" would require a satisfied rating for GG2 in order to support a ML 2 outcome.

For an appraisal using a continuous representation, the following table defines the basis for capability level ratings:

Capability Level	Process Areas
0	Default Rating
1	Generic goal for capability level 1 is rated Satisfied. (All specific goals are rated Satisfied.)
2	Generic goals for capability levels 1 and 2 are rated Satisfied. (All specific goals are rated Satisfied.)
3	Generic goals for capability levels 1, 2, and 3 are rated Satisfied. (All specific goals are rated Satisfied.)

For an appraisal using a staged representation model, the "satisfied" rating for a process area may depend on the target maturity level for the appraisal – if performing the maturity level rating was selected by the appraisal sponsor.

For CMMI models, rating a process area "staged at maturity level 2" as satisfied would require a satisfied rating for generic goal 2 in order to support a maturity level 2 outcome for the appraisal. If the target maturity level for the appraisal is level 3, then generic goal 3 must be satisfied in order for the process area to be rated as satisfied.

SCAMPI

MDD 2.6.3

Determine Process Area Profile

- The appraisal team may create a process area profile (called "capability level profile" or "achievement profile" in CMMI models) that graphically depicts the ratings assigned to each process area within the scope of the appraisal.
- The generation of a process area profile is an optional activity, selected at the discretion of the appraisal sponsor and documented in the appraisal plan.
- A simple bar chart can be used for the display. Each process area is represented in a single bar along the horizontal axis, and the vertical axis represents the rating dimension (i.e., 'Satisfied' vs. 'Unsatisfied' or a capability level of 0, 1, 2 or 3). The height of each bar communicates the rating for the process area represented.

SCAMPI

MDD 2.6.3

Determine Process Area Profile

- Capability levels take only the values 0, 1, 2, or 3. Intermediate values (e.g., 2.7) are not defined for this appraisal outcome, and any embellishment of the Capability Profile with such values is outside the boundaries of SCAMPI A.
- Satisfaction ratings, which may take on one of two values "Satisfied" or "Unsatisfied" for each process area, are used when the appraisal is using the staged representation.

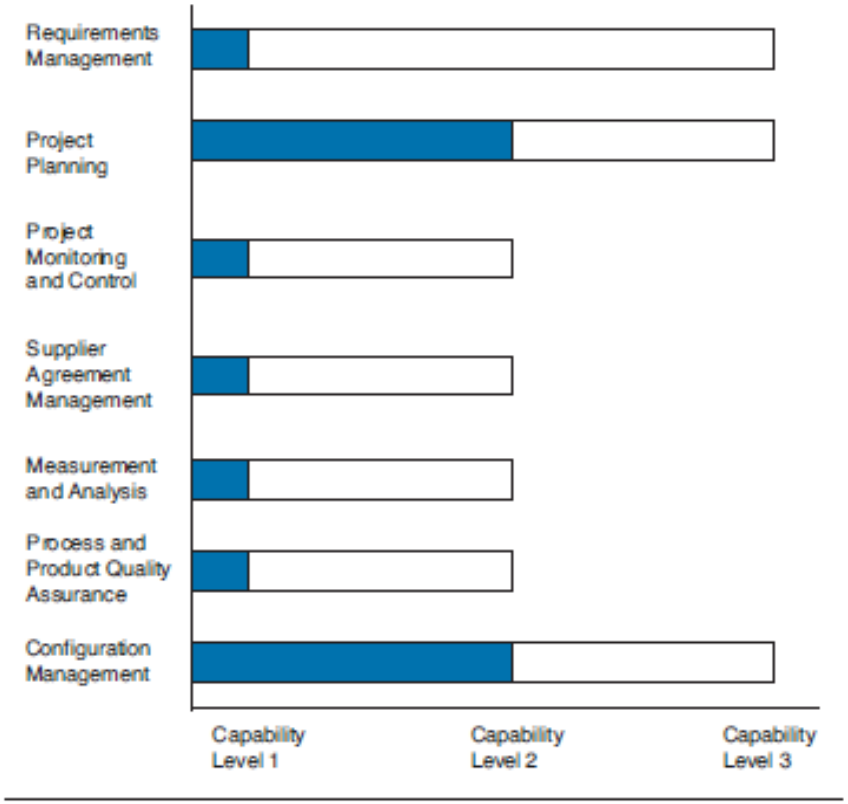


FIGURE 3.3
Example Combined Target and Achievement Profile

SCAMPI

MDD 2.6.4
Determine Maturity Level

- When using the Staged Representation, the maturity level determined is the highest level at which all PAs contained within the maturity level, and within all lower maturity levels, are rated as Satisfied or Not Applicable.
  - The single exception to this rule is that generic goal 3 for applicable maturity level 2 PAs must also be rated Satisfied for a maturity level rating of 3 or higher to be determined.

SCAMPI

MDD 2.6.4

Determine Maturity Level

- When using the Continuous Representation, the appraisal reference model provides for equivalent staging, whereby a **Capability Profile** can be used to derive an **equivalent Maturity Level rating**.
  - A maturity level for a continuous representation is achieved if the Capability Profile is at or above the target profile for all PAs for that maturity level and all lower maturity levels in the equivalent staging, excepting those PAs that are designated as Not Applicable.
  - The equivalence of particular Capability Profiles and particular maturity levels is addressed in the reference model.

SCAMPI

MDD 2.6.5

Document Appraisal Results

- The appraisal team shall
  - document the final findings
  - document the rating outcome(s)
  - document the Appraisal Disclosure Statement (ADS)
    - The ADS is a summary statement describing the appraisal results that includes the conditions and constraints under which the appraisal was performed.
    - The ADS contains information considered essential to adequately interpret the meaning of assigned maturity level or capability level ratings.
    - The ADS is prepared by the appraisal team leader and provided to the appraisal sponsor.
    - A template for the ADS is provided in Appendix A.

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Published Appraisal Results

- Source: https://sas.cmmiinstitute.com/pars/

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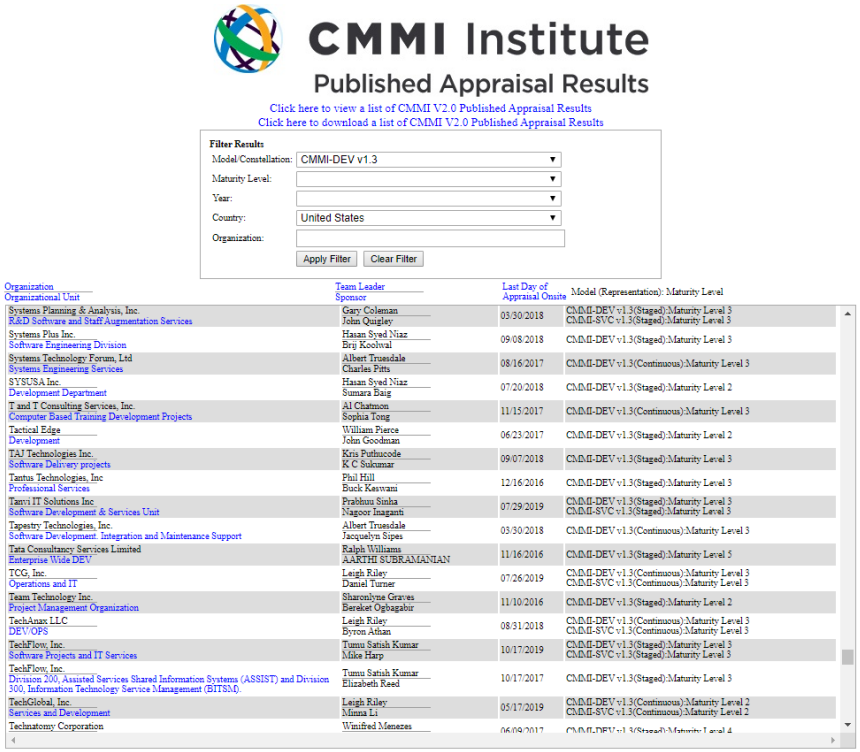
Published Appraisal Results



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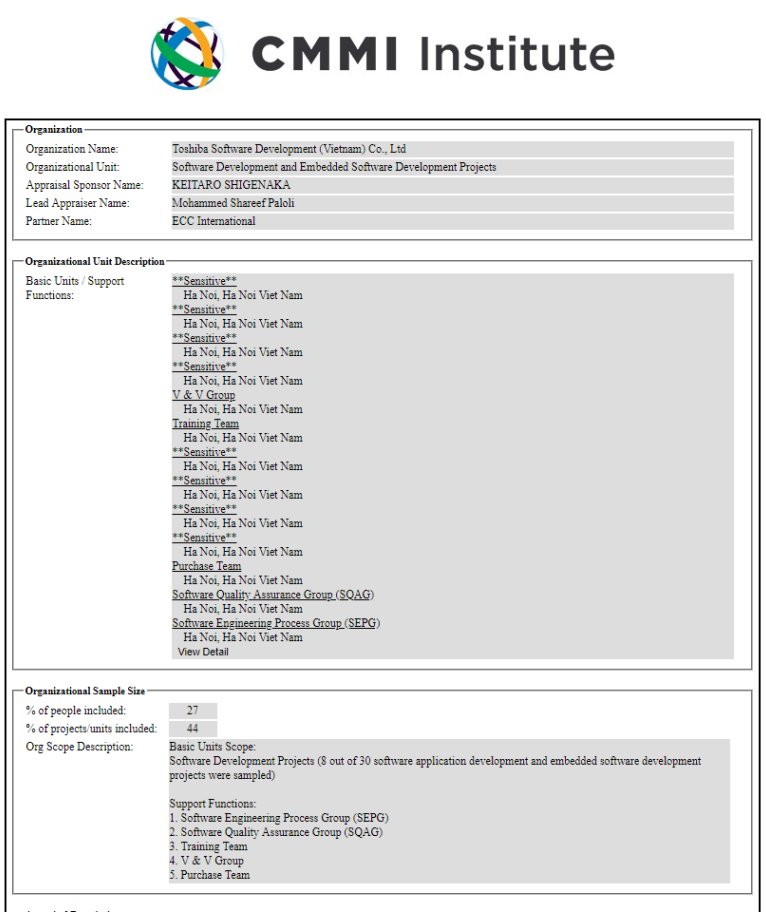
Published Appraisal Results

Click here to view a list of CMMI V2.0 Published Appraisal Results
Click here to download a list of CMMI V2.0 Published Appraisal Results

Filter Results

Model/Constellation: CMMI-DEV v1.3
Maturity Level:
Year:
Country: United States
Organization:
Apply Filter | Clear Filter

Organization / Organizational Unit	Team Leader / Sponsor	Last Day of Appraisal Onsite	Model (Representation): Maturity Level
Systems Planning & Analysis, Inc. / R&D Software and Staff Augmentation Services	Gary Coleman / John Quigley	03/30/2018	CMMI-DEV v1.3(Staged):Maturity Level 3 CMMI-SVC v1.3(Staged):Maturity Level 3
Systems Plus Inc. / Software Engineering Division	Hasan Syed Niaz / Brij Koolwal	09/08/2018	CMMI-DEV v1.3(Staged):Maturity Level 3
Systems Technology Forum, Ltd / Systems Engineering Services	Albert Truesdale / Charles Pitts	08/16/2017	CMMI-DEV v1.3(Continuous):Maturity Level 3
SYSUSA Inc. / Development Department	Hasan Syed Niaz / Sumara Baig	07/20/2018	CMMI-DEV v1.3(Staged):Maturity Level 2
T and T Consulting Services, Inc. / Computer Based Training Development Projects	Al Chatmon / Sophia Tong	11/15/2017	CMMI-DEV v1.3(Continuous):Maturity Level 3
Tactical Edge / Development	William Pierce / John Goodman	06/23/2017	CMMI-DEV v1.3(Staged):Maturity Level 2
TAJ Technologies Inc. / Software Delivery projects	Kris Puthucode / K C Sukumar	09/07/2018	CMMI-DEV v1.3(Staged):Maturity Level 3
Tantus Technologies, Inc / Professional Services	Phil Hill / Buck Kaswani	12/16/2016	CMMI-DEV v1.3(Staged):Maturity Level 3
Tanvi IT Solutions Inc / Software Development & Services Unit	Prabhuu Sinha / Nagoor Inaganti	07/29/2019	CMMI-DEV v1.3(Staged):Maturity Level 3 CMMI-SVC v1.3(Staged):Maturity Level 3
Tapestry Technologies, Inc. / Software Development, Integration and Maintenance Support	Albert Truesdale / Jacquelyn Sipes	03/30/2018	CMMI-DEV v1.3(Continuous):Maturity Level 3
Tata Consultancy Services Limited / Enterprise Wide DEV	Ralph Williams / AARTHI SUBRAMANIAN	11/16/2016	CMMI-DEV v1.3(Staged):Maturity Level 5
TCG, Inc. / Operations and IT	Leigh Riley / Daniel Turner	07/26/2019	CMMI-DEV v1.3(Continuous):Maturity Level 3 CMMI-SVC v1.3(Continuous):Maturity Level 3
Team Technology Inc. / Project Management Organization	Sharonlyne Graves / Bereket Ogbagabir	11/10/2016	CMMI-DEV v1.3(Staged):Maturity Level 2
TechAnax LLC / DEVOPS	Leigh Riley / Byron Athan	08/31/2018	CMMI-DEV v1.3(Continuous):Maturity Level 3 CMMI-SVC v1.3(Continuous):Maturity Level 3
TechFlow, Inc. / Software Projects and IT Services	Tumu Satish Kumar / Mike Harp	10/17/2019	CMMI-DEV v1.3(Staged):Maturity Level 3 CMMI-SVC v1.3(Staged):Maturity Level 3
TechFlow, Inc. / Division 200, Assisted Services Shared Information Systems (ASSIST) and Division 500, Information Technology Service Management (BITSM).	Tumu Satish Kumar / Elizabeth Reed	10/17/2017	CMMI-DEV v1.3(Staged):Maturity Level 3
TechGlobal, Inc. / Services and Development	Leigh Riley / Minna Li	05/17/2019	CMMI-DEV v1.3(Continuous):Maturity Level 2 CMMI-SVC v1.3(Continuous):Maturity Level 2
Technatomy Corporation	Winifred Menezes	06/09/2017	CMMI-DEV v1.3(Staged):Maturity Level 4



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Organization

Organization Name:	Toshiba Software Development (Vietnam) Co., Ltd
Organizational Unit:	Software Development and Embedded Software Development Projects
Appraisal Sponsor Name:	KEITARO SHIGENAKA
Lead Appraiser Name:	Mohammed Shareef Paloli
Partner Name:	ECC International

Organizational Unit Description

Basic Units / Support Functions:

Sensitive
Ha Noi, Ha Noi Viet Nam
Sensitive
Ha Noi, Ha Noi Viet Nam
Sensitive
Ha Noi, Ha Noi Viet Nam
Sensitive
Ha Noi, Ha Noi Viet Nam
V & V Group
Ha Noi, Ha Noi Viet Nam
Training Team
Ha Noi, Ha Noi Viet Nam
Sensitive
Ha Noi, Ha Noi Viet Nam
Sensitive
Ha Noi, Ha Noi Viet Nam
Sensitive
Ha Noi, Ha Noi Viet Nam
Sensitive
Ha Noi, Ha Noi Viet Nam
Purchase Team
Ha Noi, Ha Noi Viet Nam
Software Quality Assurance Group (SQAG)
Ha Noi, Ha Noi Viet Nam
Software Engineering Process Group (SEPG)
Ha Noi, Ha Noi Viet Nam
View Detail

Organizational Sample Size

% of people included:	27
% of projects/units included:	44
Org Scope Description:	Basic Units Scope: Software Development Projects (8 out of 30 software application development and embedded software development projects were sampled) Support Functions: 1. Software Engineering Process Group (SEPG) 2. Software Quality Assurance Group (SQAG) 3. Training Team 4. V & V Group 5. Purchase Team

References

- Standard CMMI® Appraisal Method for Process Improvement (SCAMPISM) A, Version 1.3: Method Definition Document (MDD), CMU/SEI-2011-HB-001, http://resources.sei.cmu.edu/library/asset-view.cfm?assetid=9703, 2011.
- CMMI for Development (CMMI-DEV), v.1.3, CMU/SEI-2010-TR-033, ESC-TR-2010-033, SEI/CMU, Nov. 2010. http://resources.sei.cmu.edu/library/asset-view.cfm?assetID=9661, 2010.
- Humphrey, Watts S. Managing the Software Process, Addison Wesley, 1989. (29th Printing, 2003) (ISBN: 0-201-18095-2)