Carnegie Mellon
Software Engineering Institute

Pittsburgh, PA 15213-3890

CMMI®

SCAMPI V1.1 Method Overview

Charles J. Ryan

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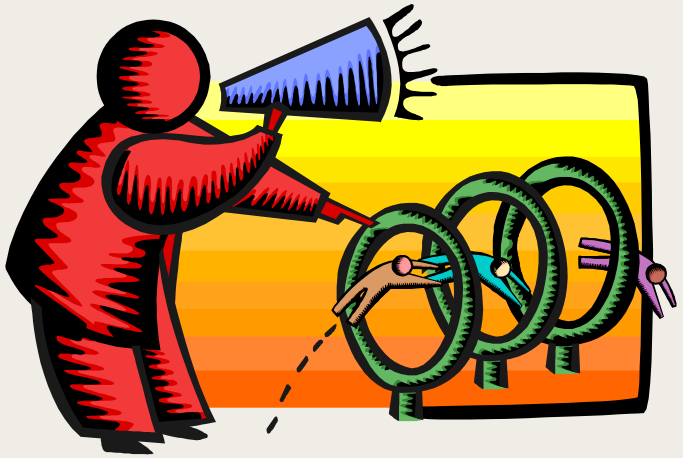
Objectives



Review key characteristics of SCAMPI.

Describe the flow of appraisal activities at a high level.

Discuss appraisal outputs.

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CMMI®

Standard CMMI® Appraisal Method for Process Improvement (SCAMPI)

1. Appraisal Requirements for CMMI (ARC), V1.1
2. SCAMPI Method Definition Document (MDD), V1.1
3. Appropriate Capability Maturity Model ® Integration (CMMI SM), Version 1.1 document (Staged/Continuous, SE/SW, IPPD, SS)
4. Standard CMMI ® Appraisal Method for Process Improvement (SCAMPI SM), Version 1.1: Method Implementation Guidance for Government Source Selection and Contract Process Monitoring

SCAMPI Characteristics

An ARC compliant appraisal method defined in the MDD

Designed to provide benchmark quality ratings relative to CMMI

Applicable to a range of appraisal usage modes

Performed by a trained and experienced team

Led by an SEI-Authorized SCAMPI Lead Appraiser

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Multiple Usage Modes

SCAMPI is intended for a variety of uses:

- Internal Process Improvement
- Supplier Selection
- Process Monitoring

Usage-specific considerations drive method tailoring and enactment decisions.

All method requirements are satisfied in each usage mode.

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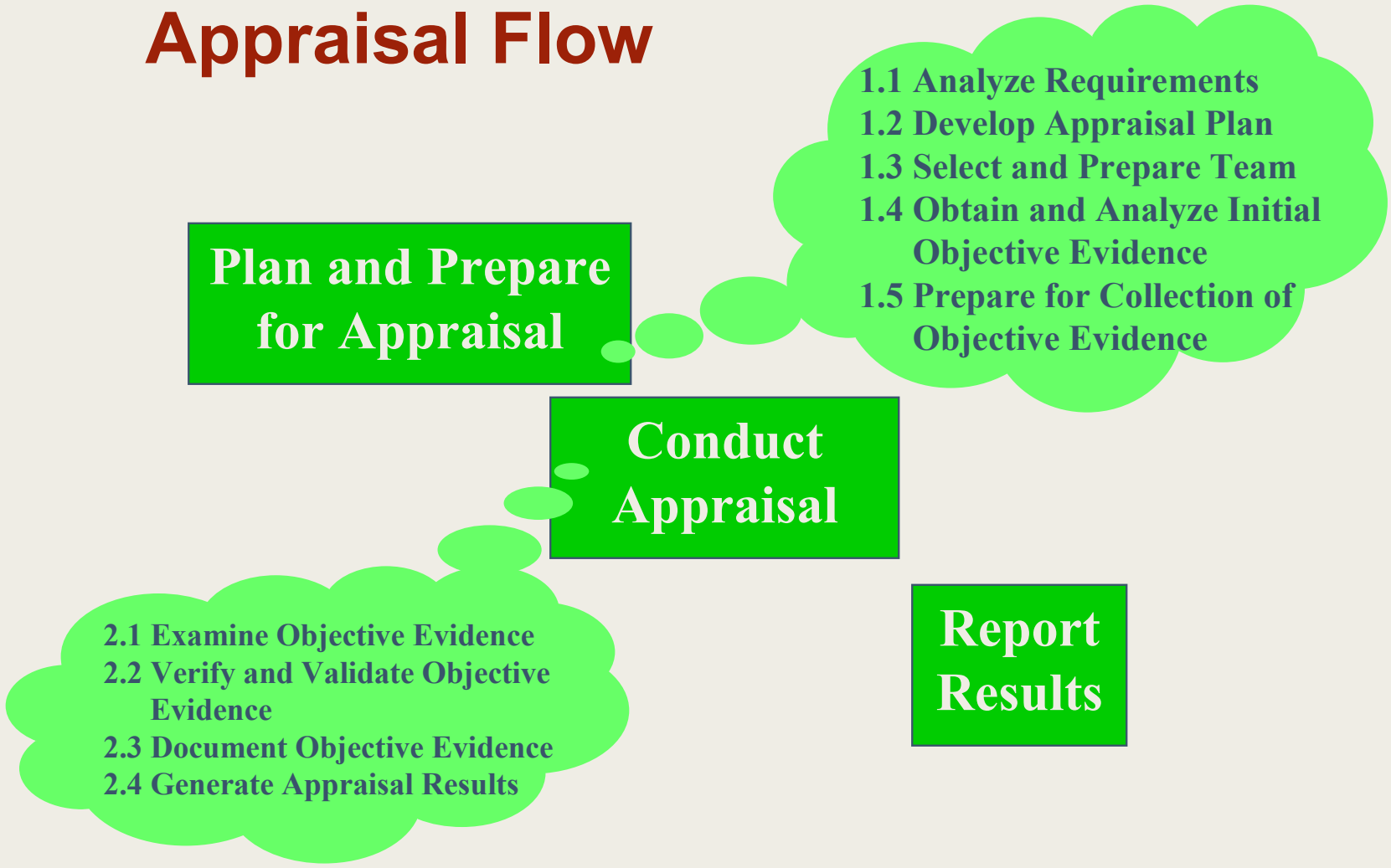
Appraisal Flow



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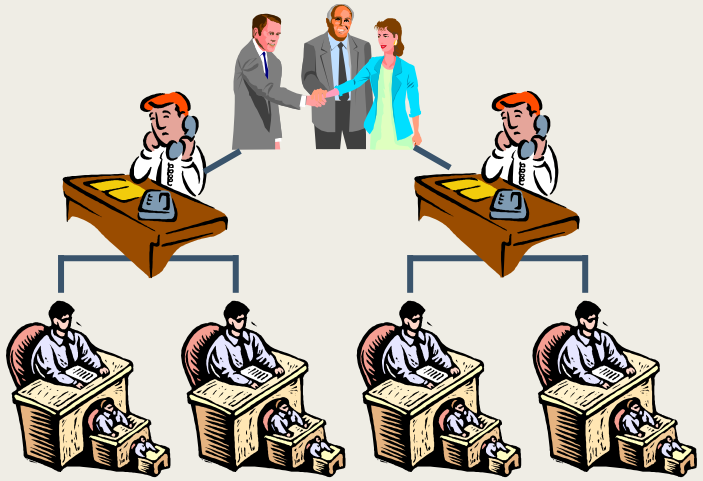
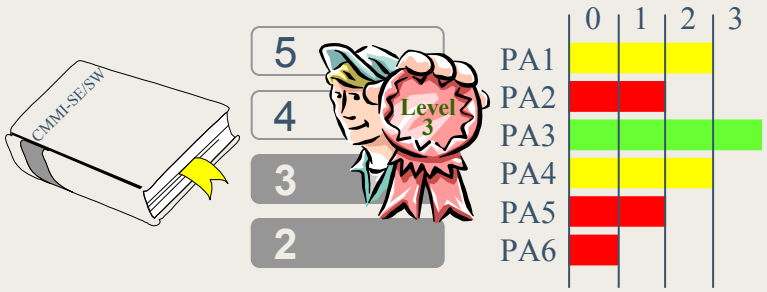
Appraisal Scope

Defining the
"Organizational Unit"



Selecting a CMMI model,
representation, and scope



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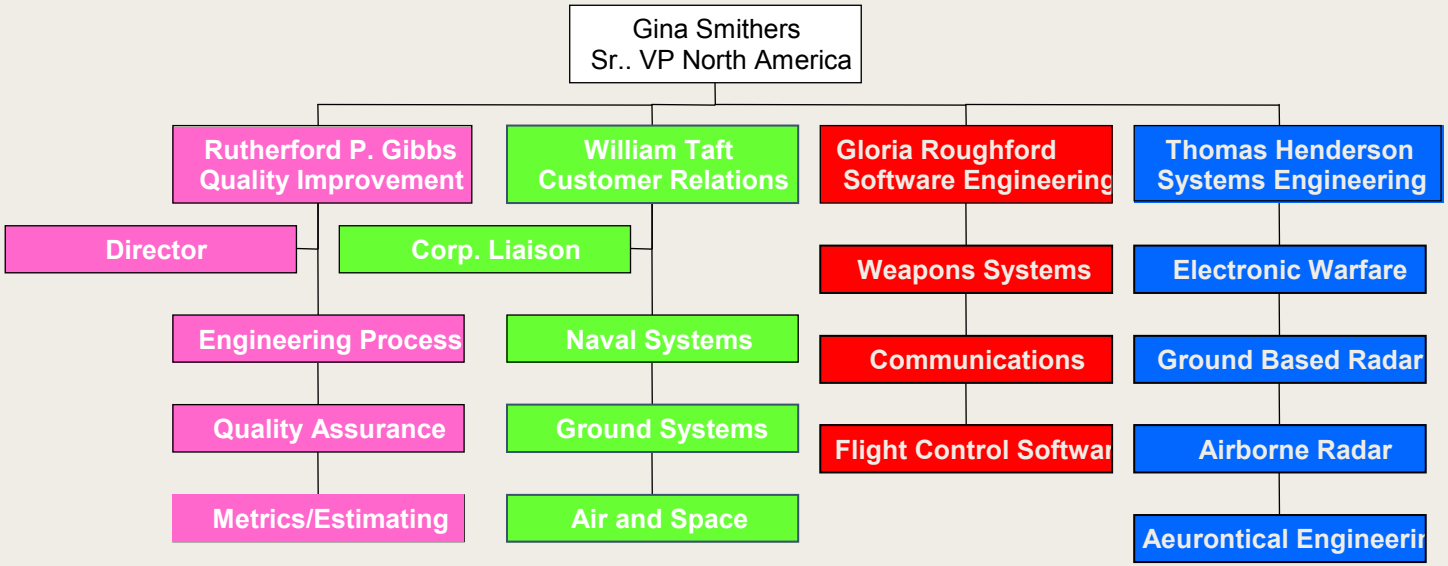
Organization Scope



A "Representative" Organization Sample

Compromising among competing criteria

- Percentage of personnel represented
- Mix of "lines of business" included
- Balance of profit/loss centers sampled
- Including enough specialties and departments
- Focus on "showcase projects" and/or "in-house efforts"

Weighing priorities of the sponsor

- Focus on one receptive department
- Emphasis on a particular "line of business"
- Exploit "showcase projects" to spread best practices
- Benchmarking for process monitoring

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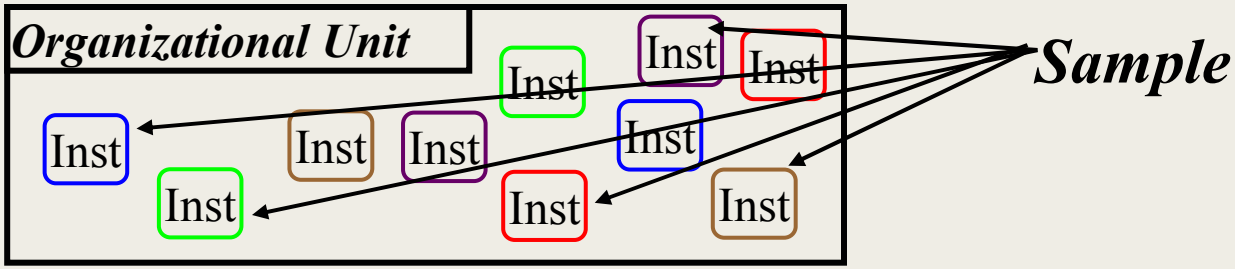
Sampling and Instantiation in Appraisals

1. A sample of practice instantiations (within the organizational unit) is identified.



2. Implementation of practice is appraised for each member of the sample instantiations.
3. Extent to which the practice is implemented across the sample is used to indicate the extent to which the practice is implemented in the organizational unit.

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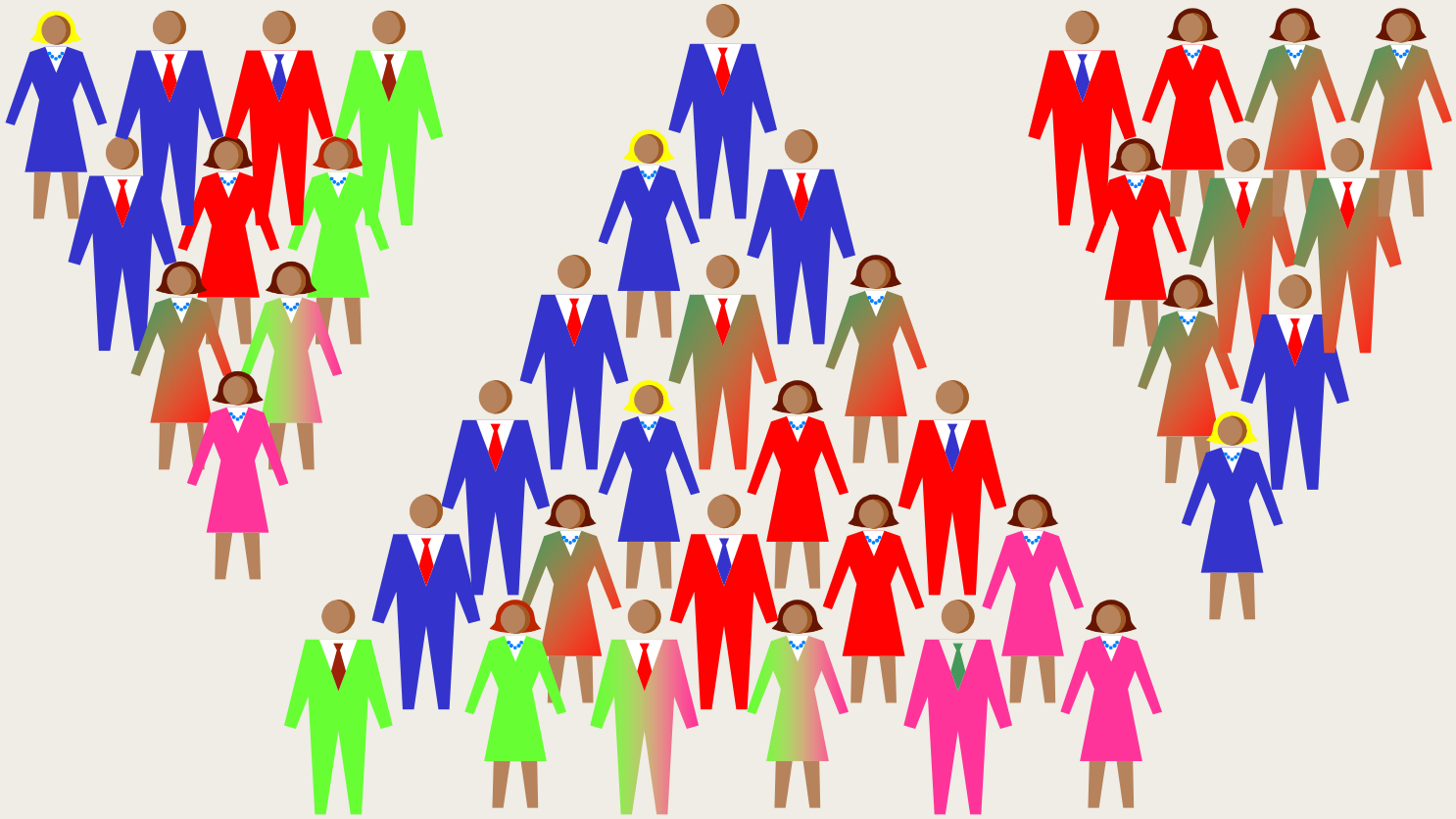
Projects Comprised of Individuals



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Documenting the Appraisal Plan

The Appraisal Input identifies select planning parameters that require sponsor approval.

The appraisal plan is reviewed and signed by the sponsor and relevant stakeholders.

Resources, cost, schedule, logistics, and risks are managed using the appraisal plan.

Required elements of the plan are documented on page II-30 of the MDD.

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Preparing the Organization

Applicability of a benchmarking method
- effort and cost must be justified by need
- alternative methods may be more common
- rigorous standards not to be compromised

Verification and discovery-oriented appraisal
- organizational unit's understanding must be verified
- unknown implementations of practices must be discovered

Interplay between preparedness and schedule
- appraisals don't have to require extended work hours
- people work best when the conditions aren't adverse
- effort invested early pays great dividends later

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Readiness Reviews

Negotiations and estimates are based on assumptions.

- assumptions change due to unforeseen events
- new information leads to different assumptions
- feasibility of the plan is contingent on key assumptions

Plan to evaluate the feasibility of the plan and be prepared to re-plan based on revelations and unplanned events.

Do not compromise your obligation to negotiate for a reasonable appraisal plan. The quality of the outputs is governed, in large part, by the process used.

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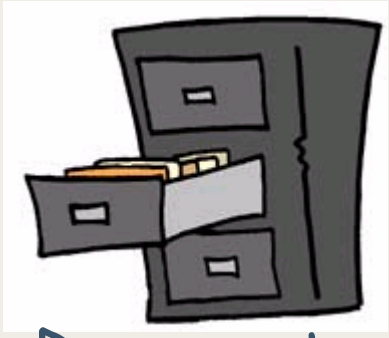
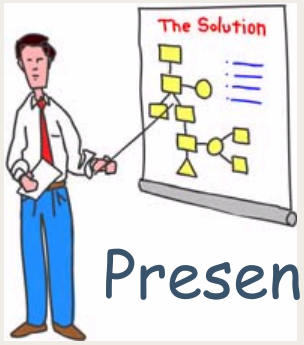
Data Collection

Instruments

Interviews



Documents



Presentations

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Characterizing Implementation

The aggregate of objective evidence is used as the basis for determining practice implementation.

Every sampled instance of the practice is characterized.

- Fully Implemented (FI)
- Largely Implemented (LI)
- Partially Implemented (PI)
- Not Implemented (NI)

Practice implementation at the organizational unit level is a function of the degree of practice implementation at the instantiation level.

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PI Characterization Criteria*

Fully Implemented (FI)	• Direct artifacts present and appropriate • Supported by indirect artifact and/or affirmation • No substantial weaknesses noted
Largely Implemented (LI)	• Direct artifacts present and appropriate • Supported by indirect artifact and/or affirmation • One or more substantial weaknesses noted
Partially Implemented (PI)	• Direct artifacts absent or judged inadequate • Artifacts or affirmations indicate some aspects of the practice are implemented • One or more weaknesses noted
Not Implemented (NI)	• Any situation not covered by above

• SMDD Part II: Activity 2.2.2: Parameters and Limits

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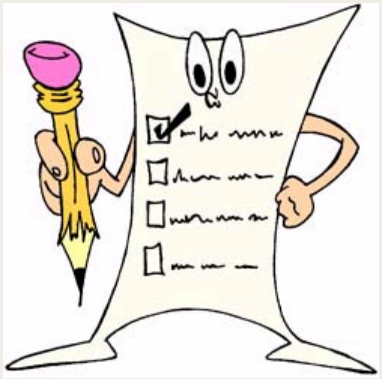
Validating Preliminary Findings

Findings Presentation

Focus Group



Survey Instrument

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Rules for Rating CMMI Goals

Goal ratings are a function of the extent to which the corresponding practices are present in the planned and implemented processes of the organization.

Team judgement is used to rate goals where the objective evidence doesn't render the outcome plainly obvious.

- If all practices are FI, then the goal must be satisfied.
- If all practices are NI, the goal can't be satisfied.
- The conditions between the two extremes require professional judgment.

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Appraisal Output

Team must produce and report
- Appraisal Disclosure Statement
- findings (statements of strengths & weaknesses)

Team must produce but need not report
- ratings of specific and generic goals

Optional outputs
- capability level ratings for process areas (PAs)
- maturity level

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Appraisal Disclosure Statement (ADS)

Summarizes the appraisal results and conditions under which the appraisal was performed

- Contains essential information to adequately interpret the meaning of assigned maturity and/or capability level rating

Prepared by the Team Leader and provided to the appraisal sponsor at the conclusion of the appraisal

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ADS Contents [1]

- Appraisal sponsor's name, organizational affiliation
- Team leader name, organizational affiliation
- Team members names, organizational affiliations
- Identification of organizational unit to which the ratings are applicable, domains examined
- CMMI model used (version, representation, domains)
- Appraisal method name and version
- Itemization of process areas rated, and those not rated
- Maturity level and/or capability level ratings assigned
- Dates of on-site activities

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ADS Contents [2]

Statement affirming all SCAMPI requirements were met

- Signature of appraisal team leader
- Signatures of appraisal team members and appraisal sponsor (optional)
- Date of issuance of ADS

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Detailed Data Profiles

	PA ->	RM	PP	PMC	SAM	MA	PPGA	CM	RD	TS	PI
Specific Goal 1		S	S	U	NR	U	S	S	S	U	S
	SP1.1	LI	FI	LI	NR	PI	FI	FI	LI	LI	FI
	SP1.2	FI	FI	FI	NR	LI	FI	FI	FI	FI	FI
	SP1.3	FI	FI	FI	NR	PI		FI		PI	FI
	SP1.4	FI	FI	NI		PI					
	SP1.5	FI									
	SP1.6										
	SP1.7										
Specific Goal 2			U	S	NR	U	S	S	S	U	S
	SP2.1		FI	FI	NR	PI	FI	FI	FI	FI	FI
	SP2.2		FI	FI	NR	PI	FI	FI	FI	FI	FI
	SP2.3		PI	FI	NR	PI			LI	LI	
	SP2.4		FI		NR	PI				PI	
	SP2.5		FI								
	SP2.6		NI								
	SP2.7		FI								
	SP2.8										
Specific Goal 3			S					S	S	S	U
	SP3.1		FI					FI	FI	FI	FI
	SP3.2		FI					FI	FI	FI	PI
	SP3.3		FI						FI		PI
	SP3.4								LI		PI
	SP3.5								FI		
Generic Goal 2		U	U	S	NR	U	S	S	S	U	U
	GP2.1	FI	FI	FI	NR	NI	FI	FI	FI	LI	NI
	GP2.2	FI	FI	FI	NR	PI	FI	FI	FI	LI	LI
	GP2.3	FI	FI	FI	NR	PI	FI	FI	FI	FI	FI
	GP2.4	FI	FI	FI	NR	PI	FI	FI	FI	FI	LI
	GP2.5	FI	FI	FI	NR	NI	FI	FI	FI	LI	LI
	GP2.6	FI	FI	FI	NR	PI	FI	FI	FI	FI	FI
	GP2.7	PI	PI	FI	NR	NI	FI	LI	LI	PI	PI
	GP2.8	FI	FI	FI	NR	NI	FI	FI	FI	FI	LI
	GP2.9	FI	FI	FI	NR	NI	FI	FI	FI	PI	PI
	GP2.10	FI	FI	FI	NR	NI	FI	FI	FI	PI	PI
Generic Goal 3									U	U	U
	GP3.1								LI	LI	PI
	GP3.2								PI	PI	PI

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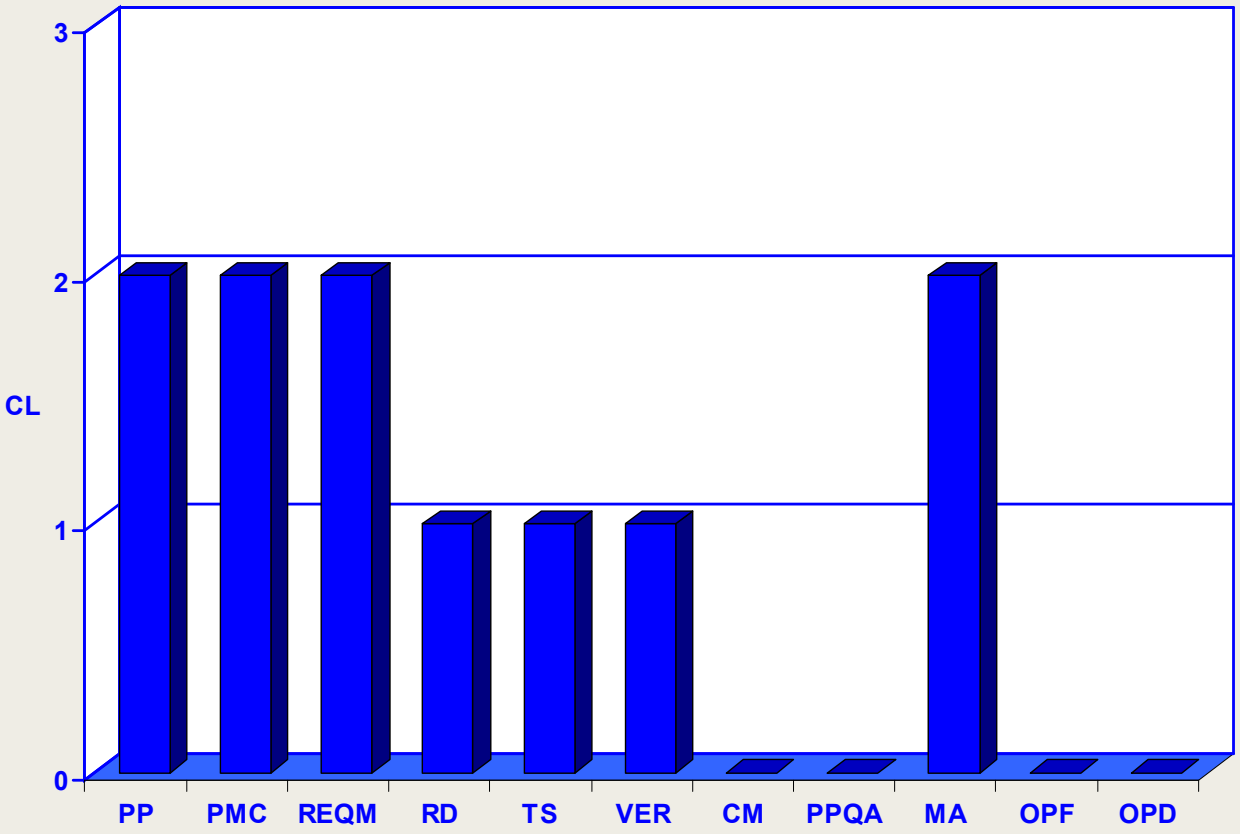
Capability Profile



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Equivalent Staging

A profile of capability level ratings can be used to derive an “equivalent” maturity level rating, using appendix F from the CMMI models.

Exclusion of process areas from the appraisal scope may preclude the derivation of an equivalent maturity level rating.

Name	Abbr	ML	CL1	CL2	CL3	CL4	CL5
Requirements Management	REQM	2					
Project Planning	PP	2					
Project Monitoring and Control	PMC	2		Target Profile 2			
Supplier Selection and Monitoring	SSM	2					
Measurement and Analysis	MA	2					
Process and Product Quality Assurance	PPQA	2					
Configuration Management	CM	2					
Requirements Development	RD	3					
Technical Solution	TS	3					
Product Integration	PI	3					
Verification	VER	3					
Validation	VAL	3					
Organizational Process Focus	OPF	3					
Organizational Process Definition	OPD	3					
Organizational Training	OT	3			Target Profile 3		
Integrated Project Management (IPPD)	IPM	3					
Integrated Supplier Management	ISM	3					
Risk Management	RSKM	3					
Integrated Teaming	IT	3					
Decision Analysis and Resolution	DAR	3					
Organizational Environment for Integration	OEI	3					
Organizational Process Performance	OPP	4		Target Profile 4			
Quantitative Project Management	QPM	4					
Quantitative Supplier Management	QSM	4					
Organizational Innovation and Deployment	OID	5		Target Profile 5			
Causal Analysis and Resolution	CAR	5					

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Conclusion

The types of appraisal uses and important features were reviewed.

Many choices and customizations must be made by the SCAMPI Lead Appraiser based on customer needs and method requirements.

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