



**Carnegie Mellon
Software Engineering Institute**

Pittsburgh, PA 15213-3890

CMMI Appraisal Results

SEPG 2003

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Presentation Objective

Provide a first look in detail at the results of CMMI[®] based appraisals

Address some questions and concerns regarding the use of CMMI as compared to CMM[®]

Encourage appraisal reporting



Outline

Demographics of Organizations Reporting SCAMPIsm Appraisals

- **Site Type**
- **First Time vs reappraisal**
- **Geographical Distribution**
- **Organizational Size**

How are organizations using CMMI?

- **Model and Method Use**
- **Staged vs Continuous**
- **Model scope alternatives**
- **Number of projects appraised**

What results are being reported?

- **Maturity Profile**
- **Process area satisfaction**

Concluding Remarks



Data Description

Data as of Feb 18, 2003

- many year end submissions included
- presentation will be available from <http://www.sei.cmu.edu/sema>

Selected appraisals based on use of CMMI v1.0 or CMMI v1.1

For results only used SCAMPI v1.1 (Class A) appraisals

And, pulled data on these organizations' most recent SW-CMM when available



Where are the Appraisal Results Coming From?

40 Companies

- 2 appraised 8 organizations
- 1 appraised 5 organizations
- 1 appraised 4 organizations
- 1 appraised 3 organizations
- 8 appraised 2 organizations
- 27 appraised 1 organizations

71 Organizations

- Commercial 29
- DoD Contractor 22
- Civil Contractor 8
- Military Org 8
- Civil Org 2
- In House Dev 2



Appraisal History

50 organizations had not reported any prior assessments before using CMMI

- 24 used CMMI v1.0
- 26 used CMMI v1.1

21 organizations were reappraised and the prior appraisal used the following models

- 14 used CMM v1.1
- 1 used SA-CMM
- 6 used CMMI v1.0



Geographic Distribution of Appraisal Results

Countries

• USA	34
• Japan	13
• Australia	8
• France	4
• India	4
• United Kingdom	2
• Taiwan	2
• Denmark	1
• Russia	1
• South Korea	1
• Switzerland	1



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Model and Appraisal Method Use

	CMMI v1.0	CMMI v1.1	Total
SCAMPI v1.1	3	33	36
SCAMPI v1.0	32	5	37
SCE	4		4
Total	39	38	77

Note: the 71 organizations account for 77 CMMI based appraisals

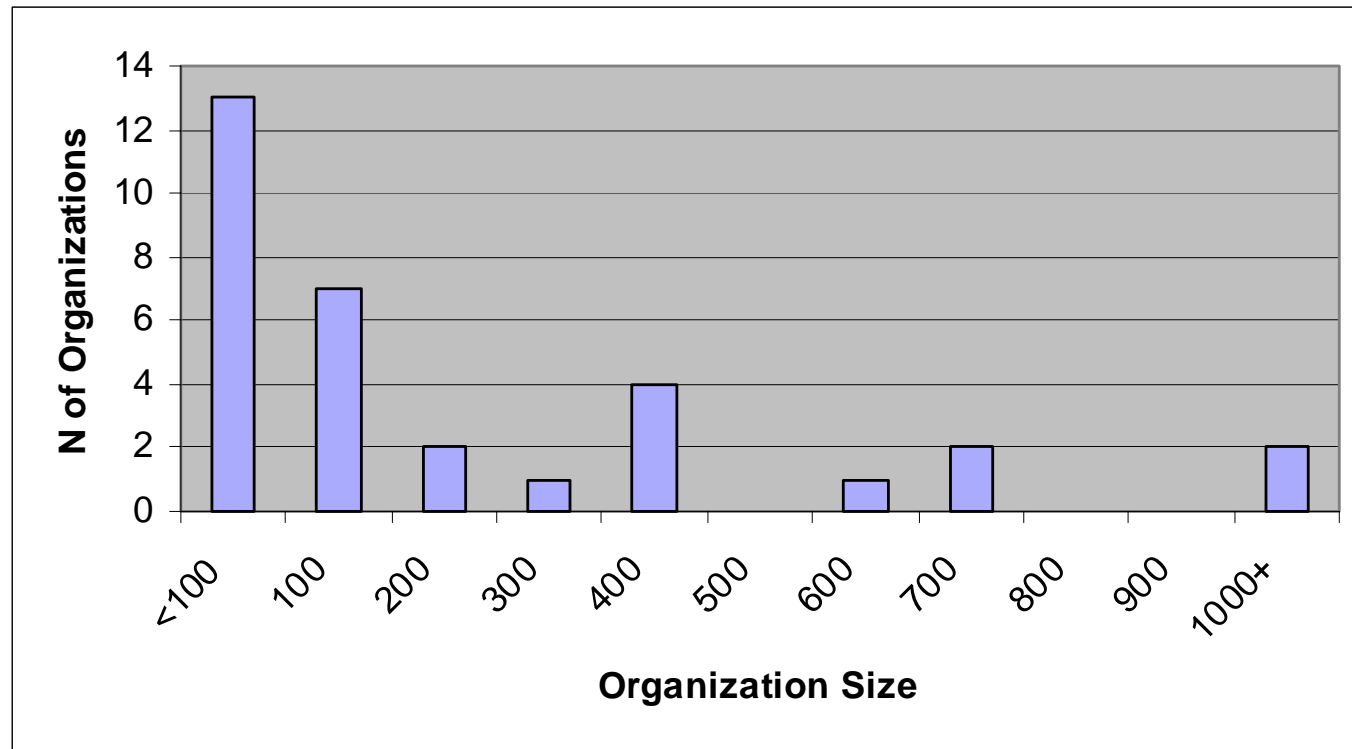


Model Scope and Representation

Scope	Staged	Continuous
SW + SE	14	6
SW + SE + IPPD	1	
SW + SE + IPPD + SS		
SW + SE + + SS	3	1
SW	3	1
SE	2	2



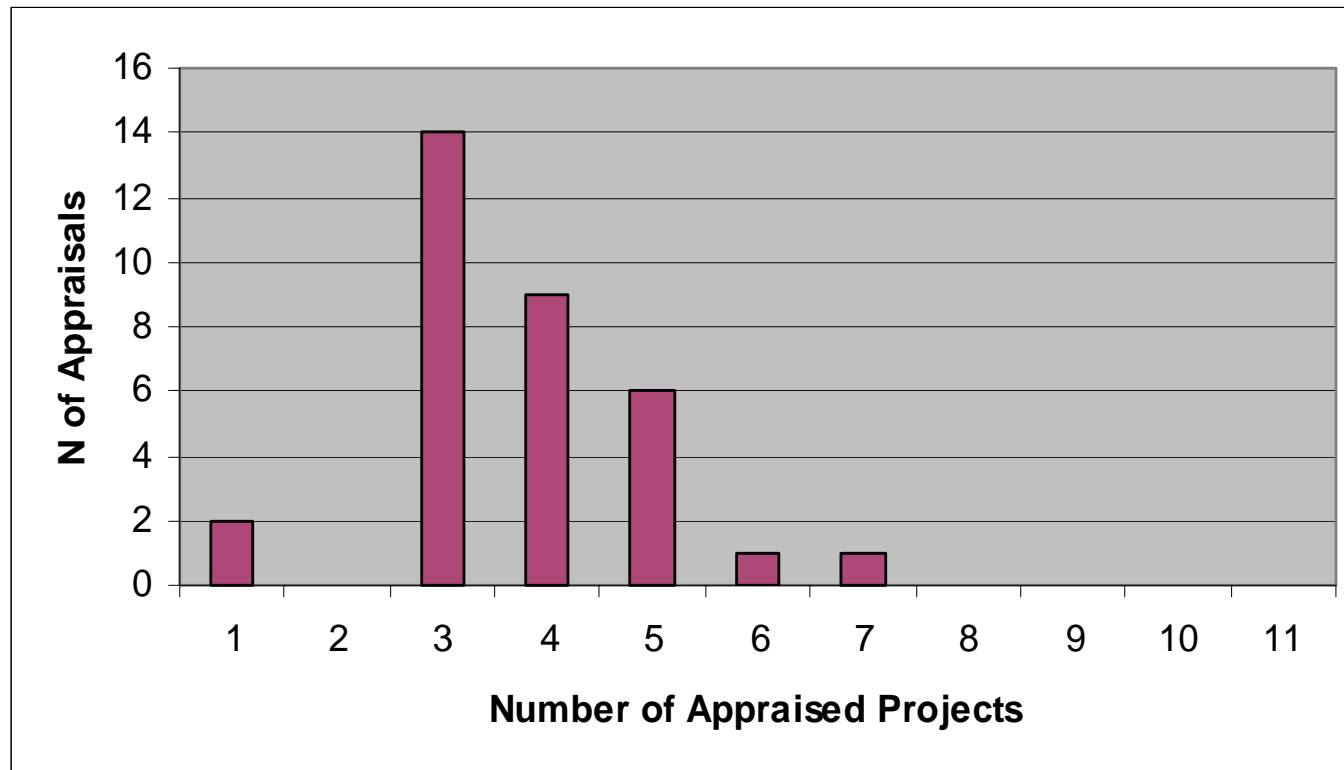
Organization Size



N = 32



Number of Projects Appraised



N = 33



Observation: Selected Architecture and Sequence of Appraisals

In the few instances of repeated use of the models, the sites used the same representation for all appraisals.

However, some indication of using SCAMPI A method with the continuous representation to perform a “gap analysis” prior to a SCAMPI A using the staged representation.



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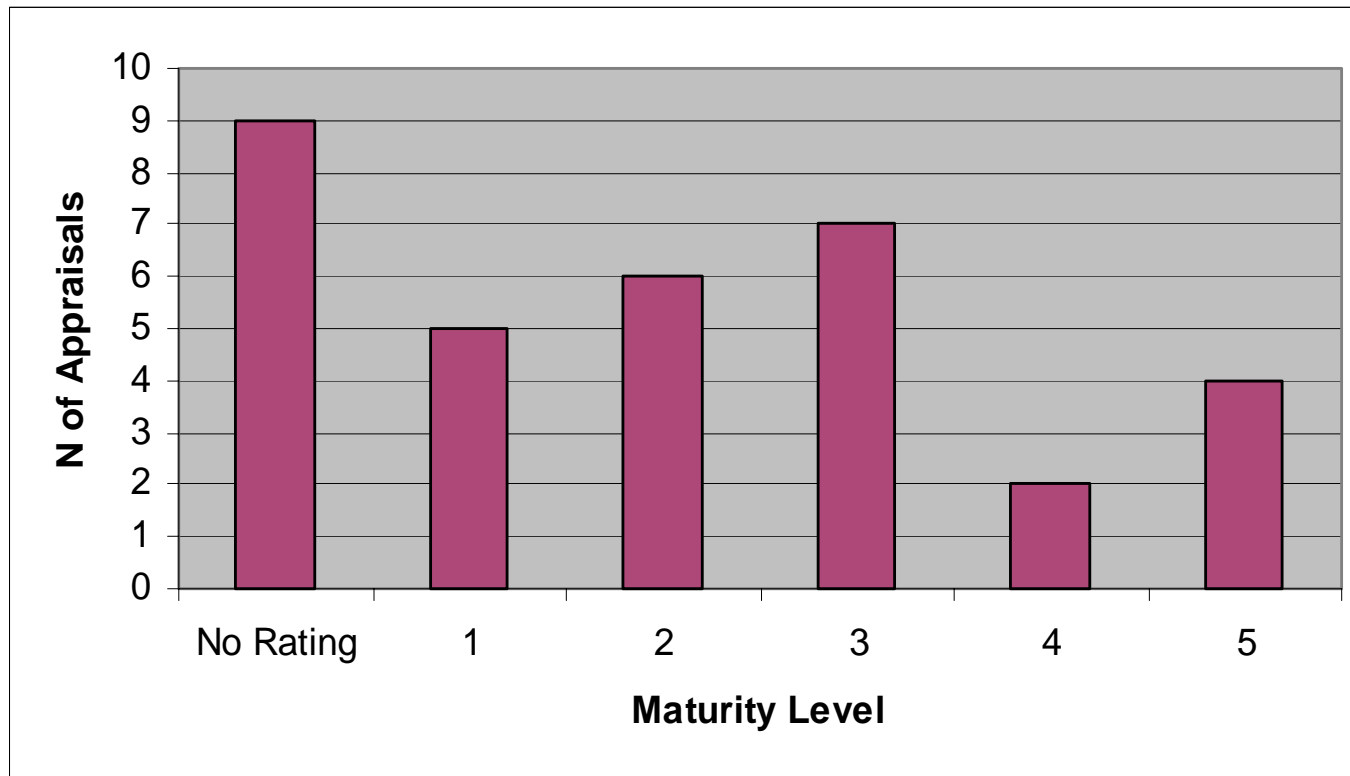
What results are being reported?

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Maturity Profile - All CMMI v1.1, SCAMPI v1.1



N = 33



Maturity Profile – 2

Maturity Level	First Time Reports	Reappraised Organizations
No Rating	8	1
1	5	
2	5	1
3	4	3
4	2	
5		4



Change in Maturity Level Rating

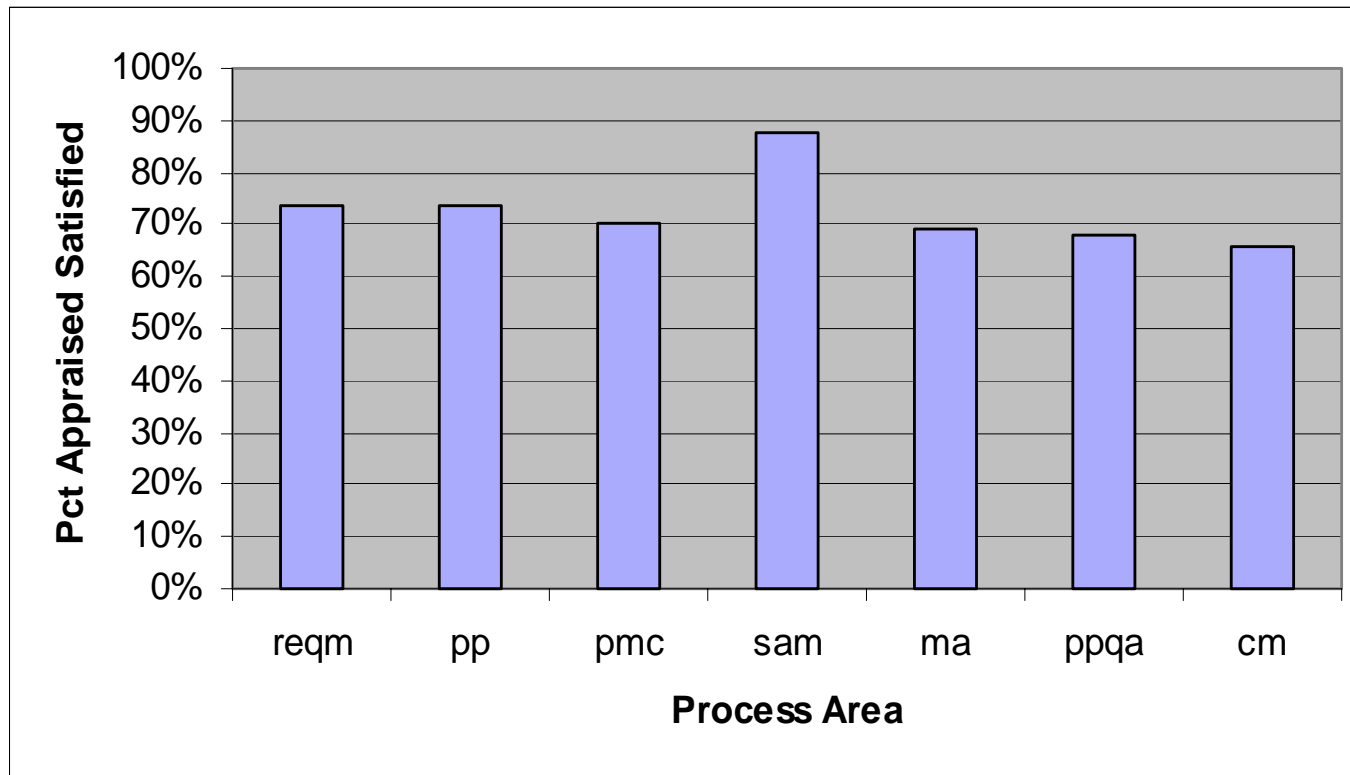
Current Maturity Level

Prior Maturity Level

	1	2	3	4	5
1					
2			1		
3		1	2		1
4					3
5					

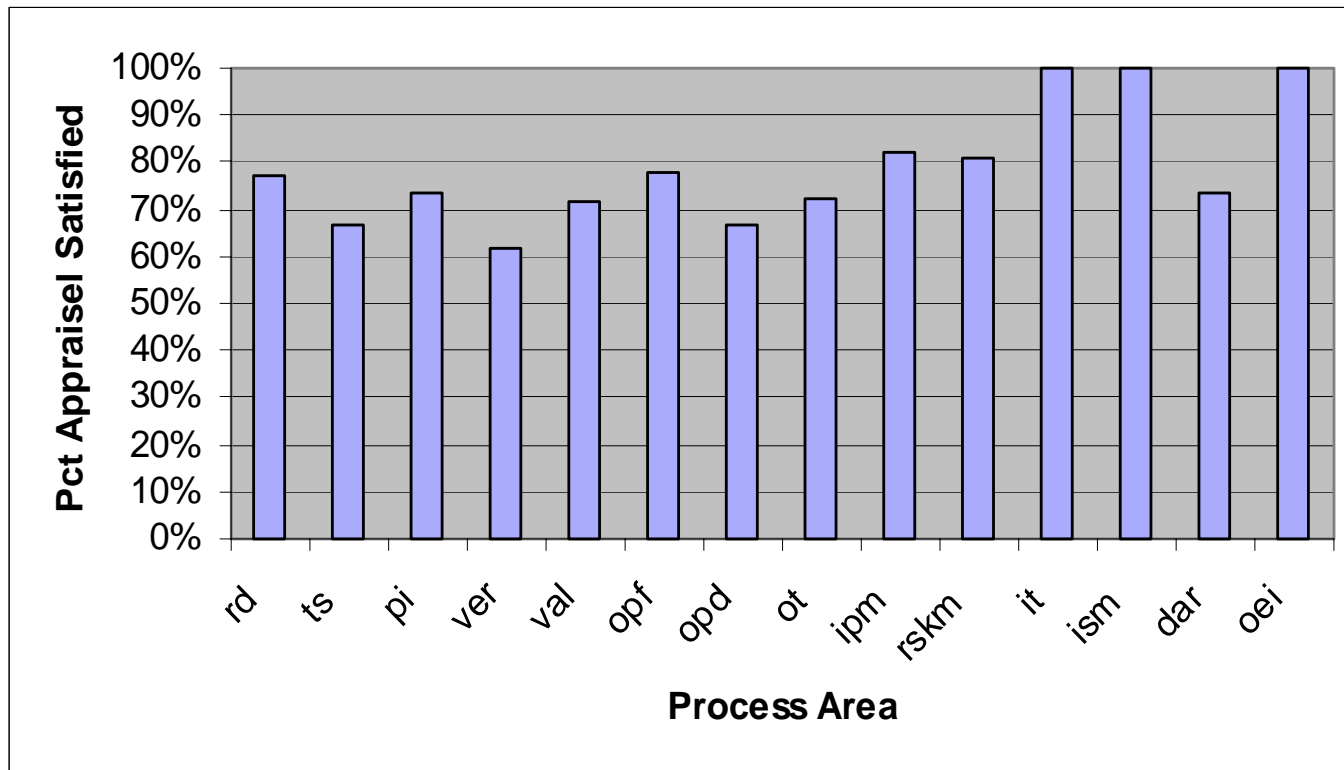


Process Area Satisfaction – ML2



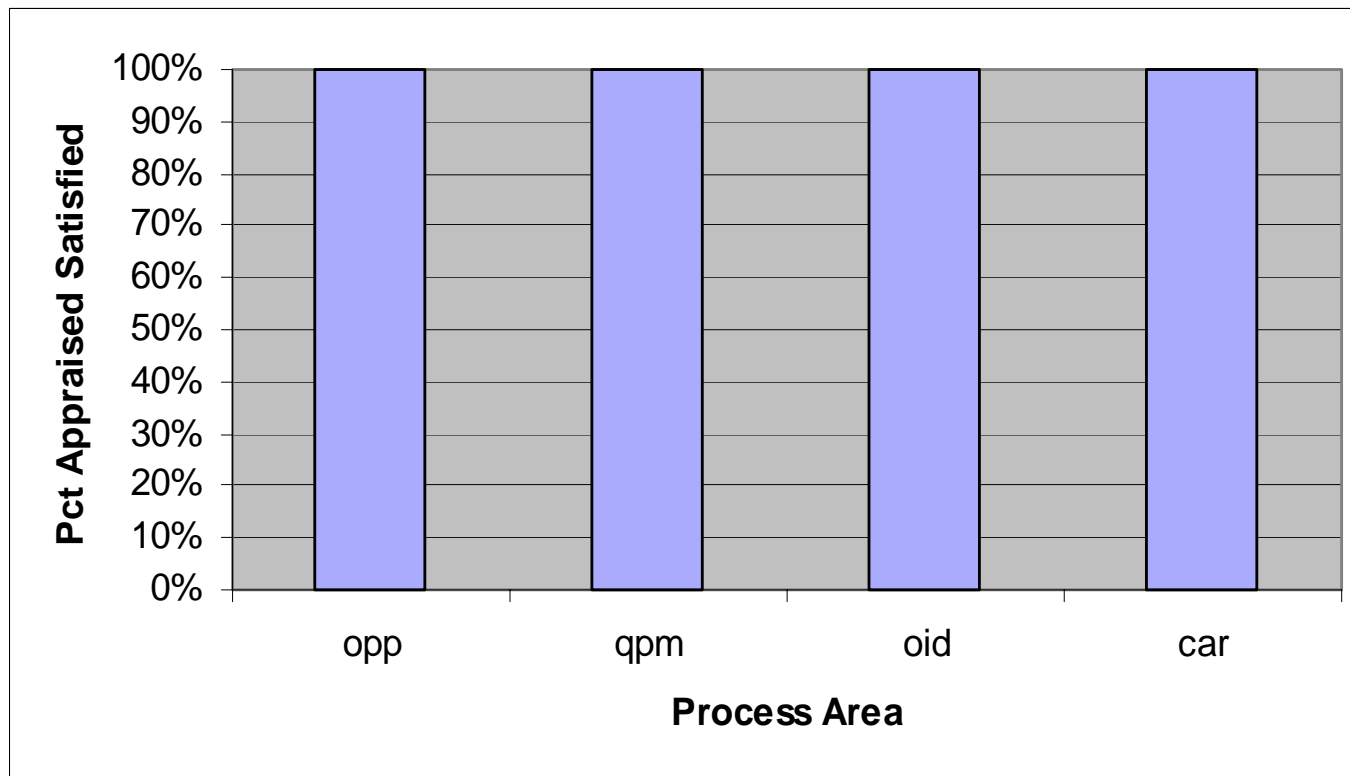


Process Area Satisfaction – ML3





Process Area Satisfaction – ML4&5





Concluding Remarks

Has the bar been raised?

- **New process areas do not seem to be appraised as unsatisfied more frequently than other process areas**
- **New process areas are not being “avoided”**

Model Scope

- **Organizations seem to mostly be using the Software and Systems Engineering scope**
- **But, note that other alternatives are being used and each discipline has been used**



What's Next?

CMMI Community Process Profile

- **Based exclusively on SCAMPI A v1.1 and CMMI v1.1**
- **Will include staged and continuous results**
- **Will be published twice a year**

Additional Data Collection

- **Start to collect B and C data**



**Carnegie Mellon
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Questions and Contact Info

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To check for new forms

<http://www.sei.cmu.edu/sema/packet.html>